THE BUILDER

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WITH WHICH IS INCORPORATED "THE BRITISH ARCHITECT."

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"TASTELESS BUILDERS"

IT is good to see Mr. St. John Ervine turning his keen critical mind to the subject of taste in building. Under this title he discusses the subject in a recent article in *The Daily Mail*. In a literary age, which will be remembered for the number of masters of the perfect essay, we have often wondered why the subject of architecture is so seldom referred to. We realise that the true flavour of the essay is not to be found in an attack upon ugliness—a subject more suitable for the pamphlet—but it is to be found in the presentation of a number of human weaknesses and follies which surround the great problem of building a home. It may be, of course, that we see the problem like the shoemaker who considers "there's nothing like leather"; but even so, we feel that a stronger case could be made for teaching the public to avoid an ugly house than in instructing it in the one picture not to miss in the Uffizzi Gallery. If the analogy is not pleasing, we simply add that the daily appeals for the protection of Rural England come from a people which does not know what is wrong. It is merely aware of a danger and is trying to hide from it.

Mr. St. John Ervine confirms the burden of our recent leader on ugliness when he says he finds himself wondering why it is that "the more beautiful a place is the more determined the builder seems to be to defile it with his hideous houses." To put it otherwise, we would say that ugly houses are ugly wherever they are. They become more noticeable (and finally a nuisance) when they multiply and destroy natural beauty. Unlike the perfect gentleman who puts more into life than he takes out of it, these houses destroy beauty and replace it with ugliness. It is difficult to supply adequate reasons why the menace of the ugly house has become so acute in recent years. Ugly houses there were in plenty in pre-war days, but post-war activity in house-building, dearer costs, and the increased areas prescribed for building purposes have no doubt each contributed to the present discontent. No longer can we fall back on the excuse for the baby, that it was only a little one. In the evolution of our social state we have a failing in that we avoid a subject until it has developed into a positive nuisance. In fact, a recognised public nuisance frequently has been the necessary prelude to many of our social developments. The menace to the countryside has been obvious to some people for many years; it has now become obvious to everyone.

At the moment, it is evident that the march of the builder means to most people the destruction of the country. "Every wood and every stream, one may say every hedge-row in the country is part of its best wealth, and not one should be destroyed except at the bidding of real necessity. . . . Wherever there is a town, or wherever there is sea coast, the destruction of the country is proceeding with terrible rapidity." This we quote from the *Times*. Clearly, house-building has reached the stage of being classed by some as a particularly noxious form of epidemic. There is a touch of grim humour in the situation. We have tried a variety of inoculations to stimulate this epidemic of house-building, and the results are disturbing. Something has gone wrong with the medical supervision, and the disfiguring disease threatens to get out of hand. Only here and there do we find any reference to the cause of the disease itself—that the problem of the ugly house is an architectural problem which ought to be solved. Consequently, the immediate remedy, apparently, is to seek shelter by preserving extensive areas of land from building development. Unfortunately, those who seek to avoid the danger by running away from it have not yet realised that they are throwing open the gates to the enemy. Just as one group is convinced that the countryside is ruined, another is equally convinced that the political success of the country is assured if urban congestion is relieved by moving the inhabitants into the country. "Village industries would spring up, the demand for factory goods would increase; many owners would be led to establish works in rural areas." If only Samuel Butler were alive to-day he would have penned another fine chapter to Erewhon. He would have described a population herded on special reserves protected by legislation, while the remainder of what was once country would be given up to an evenly distributed monotony, neither country nor town. In his quaint way he would have suggested that next time the Erewhonians might reconsider—if mess there had to be—the question of returning to a number of small messes instead of one large one.

Bereft as the public is of an intimate sense of architectural taste, there is a danger in its choice of new masters that it may blunder again. The distractions and considerations of this age may find reconciliation in some form of legislation to preserve this or that "beauty" spot, but these contradictions are not the full account of our ignorance of the disease. We believe that ugliness in building will never be tracked down until we try to understand human psychology. If we offer the facile generalisation that our social development is wrong because the public continues to build some very deplorably ugly houses, we merely balance our hope of a new social structure against the belief that the stock of architectural taste is bankrupt. This belief is one of the cardinal errors. We conclude that the moral fervour of the seventeenth-century puritanism treated beauty as a wile of the devil, but we are not so certain as many contemporary writers that the nineteenth century deliberately trampled it underfoot. There is such a thing as being too preoccupied with other matters to take notice of art, one way or the other. The nineteenth century may have been immersed in material prosperity: we may be immersed in the pursuit of pleasure. These are wide generalisations, we admit, but on the whole, we are still inclined to the belief that the public is not deliberately seeking ugliness. The desire to flee from it is a proof that the cause is not a wilful choice, and the manner of avoiding it is proof that the cause is not understood.

From all accounts it will be a happy day when the housing shortage is ended. Thus does a nation begin with high hopes and end in disillusionment. But we claim that the standard of design and accommodation in post-war houses designed by architects shows a great advance on the pre-war houses. We are glad to see that Mr. St. John Ervine has no illusions about the causes of ugliness. "I am convinced," he says, "that one of the greatest dangers to any community is this energetic tasteless man." He takes the builder to task for his dreadful little modern houses—"the expression of commonplace, dingy minds." He points out that when a town contains many examples of an older and beautiful architecture, "the local builder will cheerfully erect a devastatingly ugly house as if he had never seen the beautiful buildings about him." All this is true, and is no doubt a platitude to the architectural profession. The position, we suppose, is that when the public and the local builder between them have made a hopeless wilderness, there will be a clamour for some form of "artistic" supervision, coupled with reserved areas for further protection. And yet we read in Sir Leslie Scott's letter to the *Times*, "that it should be borne in mind that good architectural appearance is, in the vast majority of cases, no more costly than the ugly buildings now being put up."

The position seems to us to call for a large measure of clear-headed, coherent thinking. We are not impressed with the idea of saving patches of "Rural England" as a part solution, leaving the other part to be dealt with by the light-hearted politician to accommodate his ideas of rural development and urban congestion. The problem first and foremost is an architectural one, and the sooner this is realised the better. Meantime, we take it as a matter for congratulation that the nation is aroused. Whether it will attack ugliness or merely set up a defence against it entirely depends upon the intelligence of the staff work.

NOTES

1927. As the curtain goes up on the new year, inaugurated as it has been by sky and sunlight, as though to whisper hope to those who fear, it is well in this spirit to look at the situation in which we find ourselves. We are born to change continually, and if for the better we should greet it. May we not hope that this is the case to-day? A new epoch would appear to be dawning in better understanding of mutual relationships; appreciation of the fact that interests are not really opposed, but flourish most when shared together; that even the secrets, the suppressions of commerce and art, are mistaken notions of what promotes success and well-being. For it is not money or wages but production which is the fundamental issue, because in the welfare of this is contained all the rest. To make production efficient, mutual and humane, will do a thousand times more than the outlook on profits only, while it will lead incomparably to the betterment of life. So we may well think hopefully of a year which, from a cloudy background of financial difficulty, strikes, and divisions, points now to such better things.

Art and Industry. And what concerns us more nearly here is the bearing of all this on building, craftsmanship and materials. The relationships not only of industry and democracy and their reconcilement, but the interests of beauty as well. For beauty only spreads through harmony; no music sounds through her strings save when these southern winds blow. Art is the only thing that spiritualises daily life and work, and is the safeguard against the abuses of industry when profits count for more than service. All good building is stamped with one or the other of these aims, for we build as we write, or as we paint—ourselves. We see ourselves in what is done. It cannot be one thing and we another. In service and humanity there is reconcilement and beauty for all of us. As the greater includes the less, so as we approach to more efficient, mutual and humane production, will it inevitably repay us with ampler life. It is no sentimentality that we should be dwelling on such thoughts, for in them lie the best promise of better things—the promise of to-morrow.

Pessimism. There is perhaps both too much pessimism and too much shallow optimism for us to accept either the one or the other. Our optimism may well be built on healthy pessimism, though best, perhaps, to indulge in neither too much. And the more we really understand the facts of our time, the less we shall do so. We shall look less to politicians and reformers to do for us what we now see we can better do for ourselves. It is individual responsibility on which the future rests.

Our Leader. It is a true but trite observation to say that while we deplore so much ugliness in building, there cannot be any doubt that where an architect has been employed the result has been an improved standard of design. Unfortunately—for many reasons, which require thorough investigation—the architect's services are utilised on a very small percentage of the houses which are built. The advice given recently by the Prince of Wales ought to convince a number of people who, hitherto, have thought differently. Only recently we noted, at a fashionable little sea-coast town, that the only decently designed buildings erected during the last twenty years were the group of houses erected under the first Government housing scheme. In every way—in material, grouping and design—they were far ahead of any efforts of the local builder. We realise, of course, that speculative building is an aspect of the problem—and a large one—which requires very careful investigation.

Building Research. Since the Building Research Station of the Department of Scientific and Industrial Research was removed in the early part of 1926 from temporary accommodation at East Acton to more permanent buildings at Garston, near Watford, the building industry has made far more use of the technical experts now available to help to solve practical problems confronting builders in this country. The expansion, indeed, was expressly made in order that more might be done in this direction. In previous years the work had been largely concentrated on general research rather than upon an attempt to find answers to immediate difficulties; but during last year at Watford the number of requests for special investigations was more than double the number undertaken during the previous year. In recent months there has been considerable discussion in technical journals on the proposition to establish a Chair of Building at the University of Manchester. If this is realised, the Building Research Station should be of great assistance in helping towards the development of a science of building. New materials such as steel and concrete are being increasingly used. The effect of strains and stresses upon higher buildings needs to be more accurately estimated. The builder of to-day, and still more the builder of to-morrow, needs scientific training just as much as an engineer. It is now realised that it is a mistake to regard the education of builders as a craft study, and that if the Manchester Chair of Building is formed. it will no doubt work in close association with the Building Research Station, with a view to communicating the results of scientific studies and investigation direct to the younger generation in the industry.

Monuments in Minorca. Mr. Frederick Chamberlin, writing in *The Times* of December 30, gives an exceedingly interesting account of the explorations he has made in

St. Maria Maggiore in Rome. (*See page* 7.)

From "The Golden Age of Christian Classic Art." By Richter & Taylor, 1904.

Apocalyptic Vision of St. John," in the Apse in the Chapel of Sandhurst Military College. (*See page* 7.)

Minorca. There exist, apparently, three kinds of prehistoric monuments on the island. There are stone mounds, known as "Talayots," up to 30 ft. high, built with uncemented blocks, with the sides battered, and of these Mr. Chamberlin discovered no less than 186. The second type, of which sixteen are now known, are called "Taulas," and consist of two huge stones one lying across the other, as in the letter T. The third type of monument is a long, low, monolith, made in the shape of an overturned boat; these are called "naus," and sixteen have been discovered. It is pitiable to read that such monuments are being converted into road metal. There exist, however, hundreds of acres of likely territory, covered with almost impenetrable undergrowth, and we hope that the book that Mr. Chamberlin has promised will awaken an interest that will help to preserve these unique structures.

The Burlington Fine Arts Club.

AT the Burlington Fine Arts Club exhibition of pictures, drawings and furniture, one may see from the pictures of London by Canaletto what charm we have lost since Georgian times. Such pictures as the Savoy Palace (23), the Old Horse Guards (36), and Vauxhall Gardens (31), by Canaletto, show what we have lost and are never likely to recall.

Garden Squares.

AMONGST the serious results which the commercial spirit may bring upon us, we have to consider the ever-increasing height of buildings and the possible encroachment on or destruction of the many garden squares which have given such character and charm to our over-grown city. The Foundling Hospital, with its adjacent squares, is one of the pleasantest features of central London, and now that the hospital is uninhabited and a Bill before Parliament imperils it, we cannot help wondering how far our other garden squares may fare in the onward march of the commercial spirit. It would be hopeless to put impossible difficulties in the way of necessary road transport through the city, but we cannot see that the preservation of the garden squares need militate against better regulation and improvement of traffic facilities.

High Buildings.

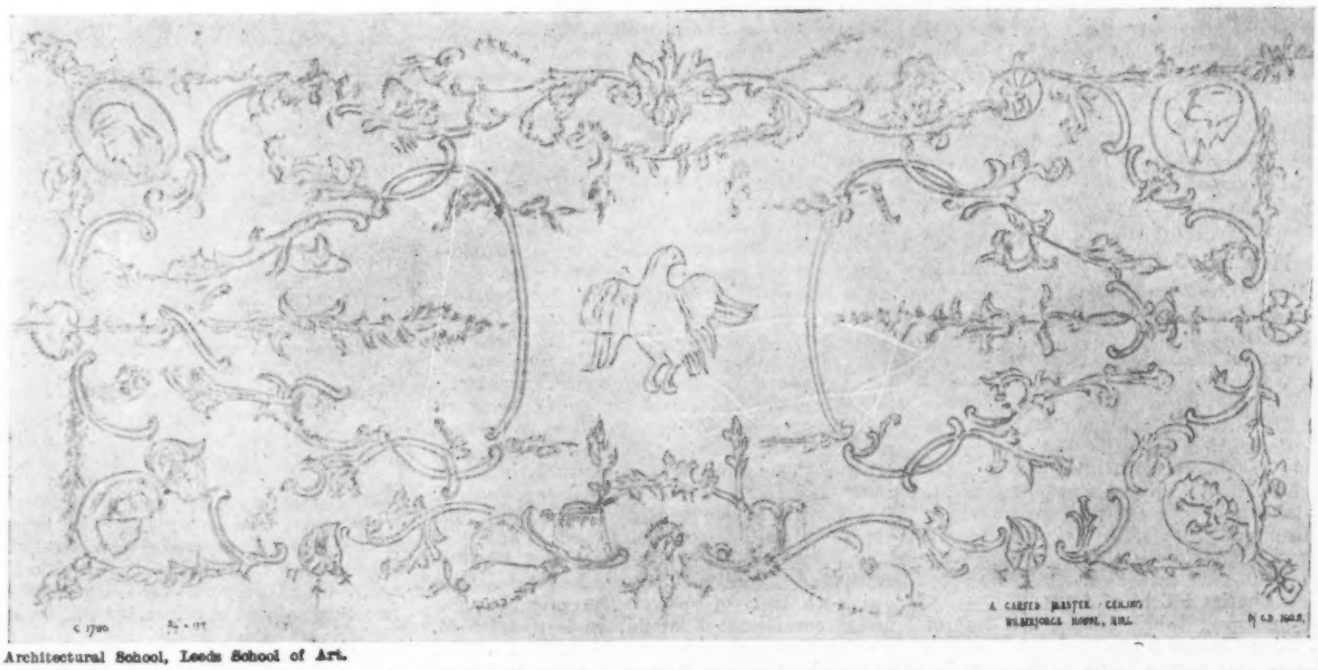
FEW have uttered more definite counsel for us than distinguished American architects, who have visualised the bad results which will accrue to London if it is allowed to become a city of sky-scrapers. We have spoilt for ever the scale of Regent-street, but fortunately the new buildings about Waterloo-place have not destroyed its spaciousness and dignity. There are a few places, such as Portland-place and Holborn, where fairly high buildings may be tolerable, but the real remedy we have to find is how to fix some sort of limit to the overcrowding of clerks and offices in our already over-crowded streets. There are many huge

From St. Maria Maggiore in Rome. (*See page* 7.)

establishments for trade or official work which would be far better placed at a distance from our crowded centres—where work would be carried on under better conditions. In these days of easy communication, it would be no hardship if many crowded buildings with their thousands of occupants were transferred to suburban areas.

Flemish and Belgian Art.

A GREAT pleasure awaits those who can appreciate the treasures of Flemish and Belgian art just opened at the Royal Academy. Some of the masterpieces of the painter's art are to be seen, besides fine examples of tapestry and carved figures. Some of the small paintings of heads in this collection certainly rank as perfect examples of the artist's work.



Architectural School, Leeds School of Art.

Students' Competitions of the Leeds and West Yorks. Architectural Society, 1925. Measured Drawings: 1st Prize.

BY MR. J. R. TOLSON.

GENERAL NEWS

Professional Announcements.

Mr. Cyril A. Farey, A.R.I.B.A., has moved from his old offices and is now practising at No. 7, Bedford-square, W.C.1. Telephone: Museum 2420.

Mr. Hector O. Corfiato, S.A.D.G., has been appointed by the Senate of the University of London as Senior Instructor in Architecture.

Protection of Ancient Buildings.

Mr. Henry Elford Luxmoor, M.A., formerly a master at Eton, has left £200 to the Society for the Protection of Ancient Buildings.

Presentation to Lord Lee.

To commemorate his work on the recent Royal Commission on Cross-River Traffic, Viscount Lee of Fareham, the chairman, has been presented with a silver cup by his colleagues. The cup is the work of Mr. Omar Ramsden, and is surmounted by a statuette representing St. Christopher bearing the infant Christ. The fact that the Commission was appointed by the King on the eve of St. Christopher, the patron saint of "travellers who cross rivers," lends appropriateness to the design.

Guildford Municipal Buildings.

Guildford Town Council were informed last week that the Municipal Building Sub-Committee met on November 11, the architect, Professor A. E. Richardson, being present, and considered various sites for the proposed Municipal Buildings and Assize Court. The chairman of the sub-committee, the architect, and the Borough Surveyor later visited the sites, and it was decided to hold another meeting to discuss the matter before Professor Richardson submitted his formal report.

Gift for Archæological Work.

Miss Gertrude Margaret Lowthian Bell, C.B.E., F.R.G.S., left unsettled property in her own disposition of the gross value of £25,604, with net personality £19,535. She left £6,000 to the British School of Archæology in Iraq upon trust for investment and to apply the income in archæological work in Iraq, but if this school should not have been founded at her death, this bequest is to revert to the British Museum upon trust for similar purposes, and she left a selection of her books to the said school.

Discovery at Windsor Castle.

During the work of securing the defective walls of the Guard Room situated between the Salisbury Tower and the Garter Tower at Windsor Castle, what appears to be an earlier wall has been found about 2 ft. 6 in. from the face of the outer wall. The latter wall is supposed to date from the time of Henry III, and is of heathstone, with deep horizontal bands of Reigate stone, but the wall discovered consists of small squared blocks of chalk. The wall in its entirety measured about 10 ft. 6 in. in thickness. The foundations of the Henry III wall do not go to the depth of the chalk wall and the former has probably become displaced.

Memorial Gardens, Belfast.

According to the *Evening Standard*, a scheme for the conversion of Belfast City Hall grounds into a Garden of Remembrance, designed by Sir A. Brumwell Thomas, has been in hand for two years, and the Corporation have passed a resolution to notify the architect that unless he gives the directions necessary to enable all completed work for which he was engaged to proceed before January 18, they will consider his failure to do so a breach of his engagement, and will take such steps as they may be advised. Sir A. Brumwell Thomas, as our readers will know, was the architect of the Belfast City Hall.

Charles I Coat of Arms.

A well-preserved tablet bearing the coat of arms of King Charles I has been laid bare in the chimney corner of a house in York, which is vested in the Dean and Chapter. Instructions have been given for the tablet to be encased in glass and preserved for all time. The find was made by workmen engaged in redecorating the house. It was only after several thicknesses of wallpaper, plaster, and wooden panelling had been removed that the tablet was revealed. According to local stories, the house in question is supposed to have been occupied by King Charles I himself on the rare occasions of his visits to York.

Exhibition of Students' Work.

We spent recently a very interesting afternoon at the Shoreditch Technical Institute, where an exhibition of students' work done during the session was being held. The school, which is under the direction of Mr. Shadrach Hicks, specialises in craftsmanship trades, amongst them being internal decorating and furniture and cabinet making, metal-working, clay modelling and the like. Students are divided into two main classes, course students (of which there are 160) and evening learners, who number about 300. There are also a number of boys who are taking a teacher's course. The exhibition was generally interesting, especially in the furniture and cabinet-making section. Exhibits of various kinds, ranged from simple caskets, the work of the first-year boy, to a very fine writing desk in polished mahogany, made by a third-year student, and filled with small drawers of beautiful workmanship. In the metal-working section we noticed particularly a loving-cup of exquisite proportions in oxidised brass, a replica of a Greek model.

Art and Industry.

A plea for greater co-operation between employers and schools of art was put forward by Mr. R. R. Carter, of the School of Art, Walsall, in his presidential address at the annual meeting of the National Society of Art Masters at the Victoria and Albert Museum. He said that looking back over their history the most striking alteration had been the gradual development and perfection of technical design. Formerly, most, if not all, of the schools were obsessed by the supreme importance of pictorial figure work. Now, not only had schools of art turned to the study of design but they had done it in the proper manner—by technical production. There had yet to grow up in England a widespread system of direct co-operation between employers and schools by means of which young employees would attend a school, and particularly a school of art, during the day in the employer's time and at the employer's cost. It was a system apparently as full of advantages to employer and employed that the long delay in its consummation seemed hard to understand.

The Proposed Empire Academy.

A scheme for the establishment of a British Empire Academy to provide a central home of the arts in London, where the talent of Great Britain and the Dominions can be displayed and maintained, will be publicly launched at a meeting which Lord Howard de Walden is to call early in the New Year. The proposed site is on the Thames Embankment in Grosvenor-road, Westminster, and £1,000,000 will be required for the project. Temporary premises are already available on the site, and the rent for these has been guaranteed for the first three years. These premises can only be leased for eight years, but it is hoped that by that time there will be sufficient funds to extend the site and erect the permanent building. The main object of the British Empire Academy is to provide adequate exhibition space for painters and sculptors, and also a theatre and concert-hall large enough to enable modern composers, musicians, and dramatists to display their talents. The provisional committee, of which Lord Howard de Walden is chairman, contend that Burlington House is now too small for its object, the encouragement of the fine arts, and they point out that every year 14,000 works of art have to be rejected by the Royal Academy owing to lack of space. The premises now under consideration would, it is understood, provide two large halls each 75 ft. long, a third long gallery 200 ft. long, and a fourth 150 ft. long. It was proposed to arrange for one of these halls to be used for concerts, plays, dances, &c., with a seating capacity for 800 people.

COMPETITION NEWS

New Office Building, Scottish Legal Life Assurance Society, Glasgow.

In this competition, for which there were seventy candidates, the following have had intimation that their designs have been selected for final competition:—

Allan & Friskin, Dundee.
Allan F. Duncan and Alex. Adam, Glasgow.
James B. Dunn, Edinburgh.
A. M'Innes Gardner, Glasgow.
Hutton & Taylor, Glasgow.
S. P. Silcock & Son and S. E. Mabon, Warrington.
Welch & Hollis, London.
Wright & Wylie, Glasgow.

Each of the competitors will receive a premium of £200 on submission of a final design. The site for the new building is in Bothwell-street, opposite the rooms of the Y.M.C.A. The building will consist of ten stories. The cost of the work will be about £300,000.

Mr. John Keppie, A.R.S.A., is the assessor.

Annual Competition of Industrial Designs.

The Royal Society of Arts fourth annual competition of industrial designs will take place in June, 1927. Entries can only be received from individual designers, not from firms, and the competition will be divided under the following heads:—(1) Architectural Decoration; (2) Textiles; (3) Furniture; (4) Book Production; (5) Pottery and Glass; and (6) Miscellaneous.

In Section I, Architectural Decoration, subsection (1) Decorative Architecture, the Council of the R.S.A. offer, under the John Stock Trust, a prize of £50 for designs for an entrance hall to a block of high-class flats in an important thoroughfare. In subsection (2) the Council of the R.S.A. offer, under the Mulready Trust, a prize of £20 for the best original topographical drawing (*i.e.*, a drawing of a building or group of buildings), or series of not more than six topographical drawings, in any medium. In subsection (3), Messrs. Bagués, Ltd., offer a prize of £50, and Mr. A. W. Martin a second prize of £25, for the best design of wrought-iron gates for a carriage entrance with two side gates for pedestrians in an important city company building. In subsection (4), the Chairman of the Architectural Decoration Committee offers a first prize of £15 and a second prize of £5 for a pedestal for an equestrian statue. In subsection (5), a prize of £10 10s. is offered by Messrs. Ackroyd & Best, Ltd., glass manufacturers, for a design for an electrical fitting intended to occupy the central position of an average-sized room. In subsection (6), Messrs. Shuffrey & Co. offer a prize of £5 5s. for a design of a fireplace, including a mantelpiece of marble, in the vestibule of an aeronautical club. In subsection (7), The Lewis Berger Scholarship, of the value of £60 to cover the cost of fees, maintenance, materials and travelling expenses, is offered for competition annually. It is tenable at the Royal College of Art, London, for a period of three months for the purpose of study in decoration and decorative painting.

In Section III, Furniture, subsection (1), Messrs. W. Turner Lord & Co. offer a first prize of £20 and a second prize of £5 for designs for furniture in walnut of Queen Anne period, suitable for a drawing-room or dining-room. In subsection (2) Messrs. Green & Abbot, Ltd., offer a first prize of £20 and a second prize of £5 for designs for inlaid furniture suitable for a bedroom. In subsection (3) Messrs. Waring & Gillow, Ltd., offer a first prize of £20 and a second prize of £5 for designs for furniture of a restrained modern style for a dining-room or bedroom. In subsection (4), Messrs. Frederick Tibbenham, Ltd., offer a first prize of £20 and a second prize of £5 for designs for decorated furniture painted in colour, with figure subjects.

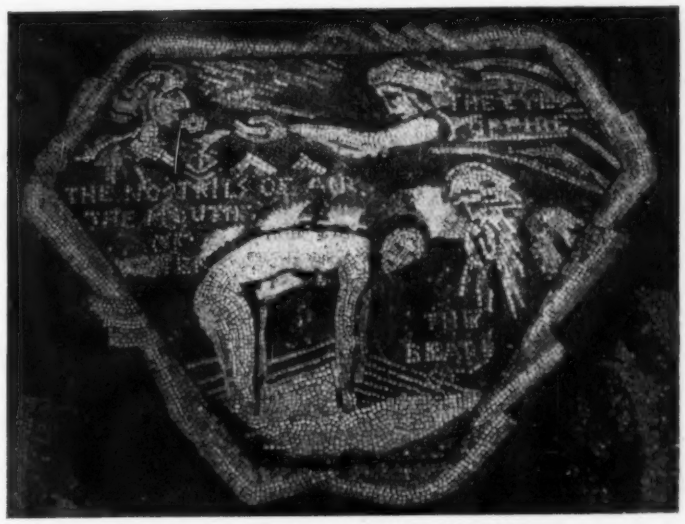
Full particulars of this competition may be obtained from Mr. G. K. Menzies, M.A., the Royal Society of Arts, John-street, W.C.2.

[There are no changes this week in the Competition Table, which is accordingly withheld.]

"The Fox Provides for Himself but God Provides for the Lion."

"The Cistern Contains the Fountain Overflows."

"Expect Poison from Standing Water."



"The Eyes of Fire; the Nostrils of Air; the Mouth of Water; the Beard of Earth."

DESIGNS SUGGESTED BY "THE PROVERBS OF HELL," BY WILLIAM BLAKE.
PORTIONS OF FLOOR IN THE BLAKE ROOM AT THE TATE GALLERY.

A Medallion from the Pavement in the Eighteenth Century House of Mr. William Jowitt, K.C., in Upper Brook-street.

Mosaic Slab: A Lady at a Roulette Table in a Casino. Property of Mr. Lytton Strachey.

MOSAIC WORK. BY MR. BORIS ANREP. (*See page* 7).

CORRESPONDENCE

[While we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

Quantity Surveyors' Fees.

SIR,—I was pleased to see the note from Mr. A. Goddard, Secretary to the Surveyors' Institution, in your issue of the 17th ult. I agree there should be no necessity to have to warn members against the practice of sacrificing fees in favour of architects, but I am of the opinion that such a warning, in the form of a circular, would be much appreciated and of assistance to quantity surveyors when negotiating terms with architects for the preparation of quantities.

The remarks contained in "Quantity Surveyor's" letter in the same issue are well founded and can be substantiated. The quantity surveyor is kept too much in the background, and direct appointments by building owners would, I believe, go a long way to eliminating the practices referred to. Q. S.

A Charing Cross Bridge Scheme.

SIR,—About ten years ago, you published in *The Builder* drawings and suggestions of mine for converting the existing Charing Cross railway bridge into a carriage way to the Surrey side, and this was followed with excellent suggestions by other architects. Having taken much interest in this subject, and having studied the drawings published in *The Builder* of December 11, showing a scheme for roadway approaches to a beautiful stone bridge, which seems to have met with much approval, I am venturing to submit a plan I have made showing a much more simple development at an immensely less cost, in the hope that it may be worth consideration.

There seem to be three objections to the approved scheme—the enormous cost, the bridge over the Strand, and the small openings to the lower deck of the proposed bridge which would mean a gloomy railway tunnel, and the blocking out of a charming view of the river and of the Houses of Parliament, Westminster Abbey and St. Paul's. By my plan, the approach to the bridge from Charing Cross-road is more direct and much less costly, as it covers ground mostly owned by the railway company and does away with the proposed bridge over the Strand. For the purpose of enlarging the railway station and obtaining three more lines of rails, it is suggested that property on the south side adjoining should be secured, and that a new railway hotel should be erected here in place of the existing hotel, which would have to be pulled down to make way for the inclined roadway. If more land is required for the station, then Craven-street and the houses on both sides should be purchased.

It is proposed to leave Villiers-street as at present for approach to the Metropolitan railway station. It is suggested that, as very heavy steam engines are now replaced by motor engines the present bridge can be reconstructed as a double-deck bridge, and no doubt architects co-operating with engineers could design a steel bridge to equal in artistic merit the one in stone.

FREDK. NESBITT KEMP.

"Consistent Cast-iron Designs."

SIR,—Mr. Maurice B. Adams asked in your issue for December 17 for instances of mixed iron and cast-brass decoration and for possible reasons for the mixture. In the grand staircase at Howick Hall, the residence of Earl Grey, burnt down last February, the balustrade was of simple wrought-iron framing with highly-finished cast-brass filling. I think the reason for the brass is that it can be cast finer than iron and is more susceptible of chasing by the hand to make it even finer.

G. REAVELL.

Sherborne Abbey.

SIR,—In your issue of August, 1921, you were good enough to publish a letter regarding a visit of mine to Sherborne Abbey with reference to the restoration of the Lady Chapel, Sherborne. A few days since I had the pleasure of visiting again the Abbey, the work now being completed with the exception of the east window. Needless to say, the work is so beautifully carried out that one can hardly imagine the Chapel had been used for dormitories. The two new parclose oak screens are especially fine examples of modern work. It is to be hoped that the necessary funds will be available for the completion of the east window.

EDWARD VALE.

MEETINGS

FRIDAY, *January* 7.

Glasgow Architectural Craftsmen's Society.—Social meeting at Ca'doro Restaurant. At 7.30 p.m.

London Society.—Visit to the Central Criminal Courts, Newgate-street, E.C.1. At 2.30 p.m.

Royal Sanitary Institute.—Mr. W. W. Jameson on "Elementary Statistics." At 90, Buckingham Palace-road, S.W.1. 6 p.m.

MONDAY, *January* 10.

Surveyors' Institution.—Mr. F. G. Baxendale on "The Effect on Values of Town Planning Schemes in their Various Stages." At 8 p.m.

Architectural Association.—Mr. Harold Stabler on "Glazed Sculpture." At 7 p.m.

Edinburgh Architectural Association.—Interchange of Lecture with Glasgow Association Section. At 8 p.m.

Royal Sanitary Institute.—Mr. A. E. Munby on "Elementary Science." At 90, Buckingham Palace-road, S.W.1. 6 p.m.

TUESDAY, *January* 11.

College of Estate Management.—Mr. G. Mould on "The Effect of Recent Legislation on (*a*) The Law of Landlord and Tenant." At 35, Lincoln's Inn Fields, W.C.2. 5.30 p.m.

The Illuminating Engineering Society.—Messrs. Jones, Lingard and Catten on "Floodlighting." At 15, Savoy-street, W.C.2. 6.30 p.m.

WEDNESDAY, *January* 12.

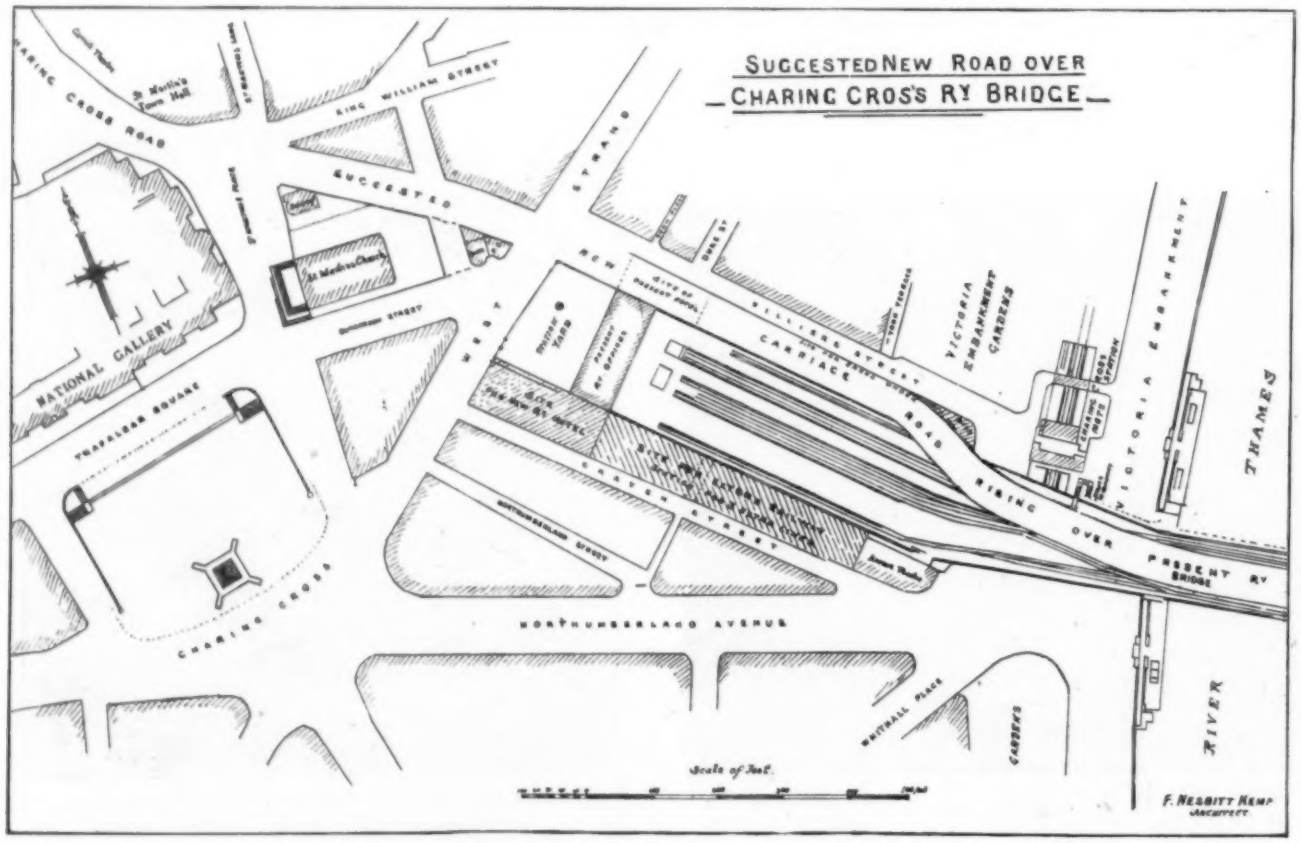
Edinburgh Architectural Association.—Mr. W. MacKay Mackenzie on "Palace Plan in Scottish Castles." At 8 p.m.

Liverpool Architectural Society.—Mr. Howard M. Robertson on "America." At 13, Harrington-street.

The Institution of Civil Engineers.—Discussion on "Dragline Excavators," by Mr. F. H. Livens. At Great George-street, S.W.1. 6 p.m.

FRIDAY, *January* 14.

Royal Sanitary Institute.—Mr. A. E. Munby on "Elementary Science." At 90, Buckingham Palace-road, S.W.1. 6 p.m.



Suggestion for a New Double-Deck Bridge at Charing Cross.

BY MR. F. NESBITT KEMP.

"MOSAICS."

THE PRESIDENT, MR. E. GUY DAWBER, took the chair at last Monday's meeting at the R.I.B.A., when a most interesting paper on "Mosaics," illustrated by a large number of lantern slides, was read by Mr. Boris Anrep. In opening, the lecturer said that the influence exercised by the material on art had not been sufficiently explored, but it was evident, however, that this influence was of an intimate and important nature. Materials affected one by a quality of their own, which formed a part of the complex art emotions. On the other hand, the material did not remain a passive matter brought to life by the will of the artist alone; it was a potent factor able to influence creative imagination, to guide its perilous walks, even to determine the ultimate aim of the artist.

Every material had a latent character, peculiarities and limitations. It might become a powerful ally to the artist who could liberate those forces and express himself in harmony with them. The magic power of the material, so long as the artist obeyed its laws, could save his art from being stillborn. But should the artist stifle the originality of his material by forcing it into giving effects foreign to its nature, the very life of it would go and with it his art. For 500 years the art of mosaic had been in a lamentable condition. Since the rise of fresco, tempera and oil, the mosaic workers, fascinated by the mastery of these arts, had remained satisfied to copy pictures made in those media. Even in the twelfth century the calligraphy of the eastern miniature seduced the mosaic artist into slavery. Later, they gratified their ambitions by petrifying the pictures of great painters like Raphael and Rubens, or the cartoons specially prepared for them after the sketches of artists in pencil and water-colour. The elegant continuity of lines, the indistinguishable gradation of tone, the fluid passages of hues of colour and other delicacies of pictorial art which thrive in oil and other media, were considered virtues in themselves and were imitated irrespective of the material. Mosaic workers had now learnt to make every possible *tour-de-force* with the clumsy tesseræ. The workshop of the Vatican prided itself on possessing 22,000 shades of enamel. Cut to microscopic proportions, those tesseræ could perform at will any acrobatic feat of pseudo-painting. In the best period of mosaic art, less than 50 shades were considered sufficient.

Mosaic, continued the lecturer, was closely linked to architecture, being essentially a monumental art. The very quality of extreme resistance gave a feeling of indestructible permanence: "*La vera pittura per l'Eternita.*" That should imply not only material endurance but should also compel the imagination towards simple and great essentials. It might be asked whether or not mosaic was a form of art which belonged to the past and, if so, why so much anxiety about reviving the dead? It would seem, indeed, a worthless task if no interest in that form of decoration existed at the present day. But in point of fact there was every reason why modern architecture should be interested in mosaic. The introduction of colour into building was a problem which concerned the architect closely, and mosaic material was quite especially qualified for that purpose. The richness of its hues, the variety of its texture, its hardness, permanence, resistance to atmospheric action, its capacity for reflecting light, put mosaic on terms of equality with the hard building materials, brick, stone, marble and concrete.

Modern architecture was evolving a new type of very large and monumental building to meet the needs of the great Imperial, industrial and commercial organisations. Those vast monuments would inevitably call upon mosaic for purposes of commemoration or for purely architectural decoration. In private houses, more invention and fantasy was now being shown in the decoration, and the demand for non-commercial, original designs by individual artists was growing daily, and mosaic offered a unique opportunity for introducing amusement and gaiety into a house and for embedding them into the very core of the structure.

Modern art was teeming with ideas eminently suitable for mosaic decoration, while mosaic establishments continued to turn out works without a breath of human spirit in them. No one was satisfied with those productions, least of all architects, who often sighed because the mosaics spoiled the effect of the building through lack of æsthetic tact. There were two directions in which modern mosaic required amendment. An effort ought to be made to bring mosaic back to its pristine position as a means of direct artistic self-expression, and, in the second place, it ought clearly to be recognised that mosaic decoration would have to abandon its pictorial arrogance and subordinate itself to the needs and indications of the architecture, so that it should not be a parasitic growth stifling its noble support for the sake of self-assertion, but that it should wholly serve to complement the ideas inherent in architecture.

Any surface decoration had its bearing upon the general architectural effect, but mosaic could have more influence on it than any other form of decoration. The mosaic could be called upon to give a scintillating light and colour in dark recesses, to envelop architectural forms, to soften surfaces and edges, to create useful points of stress and repose; to deepen and flatten effects of perspective; compress or distend proportions; to create the feeling of continuity or to separate architectural elements by staccato of isolated motifs; to concentrate or diffuse the attention of the spectator or guide his wandering gaze along a sympathetic rhythm, thus amplifying the enjoyment of architectural features. The harmony of a mosaic decoration with its architectural environment was essential. It would be a mistake to believe that mosaic need be confined to one particular style of building or one particular class of subject. Religious subjects and Byzantine architecture historically were very much connected, but it was not only in religious scenes treated in the spirit of hieratic solemnity or in the *réchauffé* of Byzantine ornament that mosaic was at its best. Mundane and frivolous subjects of modern town life, bucolic pleasures, as well as the business activities of the city could form delightful subjects for mosaic decoration, and be treated in a style suitable to the building, recording thus for future generations images of our modern civilisation, more revealing of its true spirit than the frigid commercial rhetoric now in vogue. Vast spaces, the fascination of archways, the mystery of a dome, friezes, niches and pavements would always offer an enviable field for mosaics, but even in a modern suburban semi-detached villa a mosaic medallion on the hall floor could give a delightful scope for a mosaic inspiration. The short and, if he might say so, oblique statements of life which mosaic technique imposed were entirely in keeping with the purpose of mural as with floor decoration.

The reliance of mosaic on a composition similar to that of sculptural reliefs which did not favour a deep pictorial recession allowed the unhindered assertion of architectural surfaces. The subtleties of naturalistic experience in Dutch art, the delight in sensual beauty of the Venetians, were alien to the mosaic material, which lifted even a frivolous subject to the level of highly distilled æsthetic qualities, and the intellectual content of the composition acquired through the proper mosaic technique a special significance. The genius of mosaic transformed even a trivial object into a monument of the epoch.

After the reading of his paper, Mr. Anrep proceeded to show upon the screen a series of slides of mosaic work, ancient and modern, giving some critical comment upon each example. In the course of his remarks he said it was in the first century of the Christian era that the best mosaic work was done. Having shown some fine examples of this and later periods, he followed on with slides illustrating the gradual falling away that occurred from the true genius of the material, and being especially critical of twelfth-century Italian work. Alfred Stevens's head of the Prophet Daniel, now in the Victoria and Albert Museum, was shown as an example of mosaic in which the material was wrongly handled owing to the modern practice of working exactly to an artist's cartoon. To-day, the lecturer said, we were largely creating deadly dull imitations of graphic patterns instead of allowing the material its own natural expression. Decoration of a religious character was, now so complicated with committees that it was impossible for any self-respecting artist to do what he wanted. The lecturer concluded his illustrations with slides of a number of his own works, both of a religious and a domestic character, including a chapel in Scotland, the Sandhurst Memorial Chapel, an icon in Westminster Cathedral, the floor of a house in Chelsea, and a few of the medallions from the floor of the Blake Room at the Tate Gallery, all of which were applauded by an appreciative audience. As his last slide the lecturer showed a fourth-century head, which he described as a masterpiece of mosaic.

Discussion.

Mr. E. R. D. Maclegan, C.B.E., Director and Secretary of the Victoria and Albert Museum, proposed a vote of thanks to Mr. Anrep, in the course of which he said he was not sure that the lecturer had been quite just to the twelfth century. He had shown work done in Italy by artists using the Byzantine tradition at second hand, but if he had shown some of the twelfth-century mosaic work at Daphni, at Athens, the twelfth century would have cut a much better figure. Continuing, he said he had noticed no shock of transition when passing from Mr. Anrep's own work to that magnificent fourth-century head that the lecturer had shown them. Everyone must feel that the lecturer had captured in his own work the spirit of the fine early mosaic. The speaker recalled a saying of William Morris that "Mosaic was very much like beer; it was an excellent thing provided you got enough of it at a time." That, he thought, was very sound, and he hoped that private and public patrons might be found to provide the necessary opportunities for the mosaic artist.

Mr. Philip Sawyer (of Messrs. York & Sawyer, of New York), seconding the vote of thanks, said that in America they mostly regarded mosaic as a floor material, and used it as such with travertine or stone borders. It was used extensively in the corridors of flats and hotels, but on the whole it was very mechanical work.

Mr. Charles Aitken, Director of the Tate Gallery, said that Mr. Anrep's floor of the Blake Room at the Tate Gallery was successful in keeping the mosaic convention, but with an added vivacity. One of the characteristic charms of mosaic was, he said, the irregularity of the pieces and of the joints in between; and he recalled seeing workmen carrying out repairs in the mosaics of St. Mark's and doing their best to destroy this quality by arranging the pieces with the utmost regularity and exactitude.

Mr. C. P. Walgate, Vice-President of the

Cape Institute of Architects, and Mr. Sidney Toye having contributed a few remarks to the discussion,

The President, putting the vote of thanks to the meeting, said that in this country we very seldom had opportunities of using mosaic except in floors. He wished that they could have seen the slides in colour; much of the effect of mosaic was lost in black and white.

Mr. Anrep briefly replied.

Associateship R.I.B.A. and Office Experience.

The following announcement is issued by the Board of Architectural Education:—

The attention of candidates for the R.I.B.A. Final Examination is called to the fact that no successful candidate will be admitted to candidature as Associate without having had at least one year's experience in an architect's office or in building work and/or in a builder's office, or in gaining knowledge of the practical side of building.

The Examinations, November and December, 1926.

THE INTERMEDIATE.

The Intermediate Examination, qualifying for election as Student R.I.B.A., was held in London from November 19 to 25, and in Manchester from November 19 to 24, 1926. Of the 69 candidates examined, 31 passed and 38 were relegated. The successful candidates are as follows, the names being given in order of merit as placed by the examiners:—

J. E. Potter.
J. T. Castle.
J. W. Poltock.
J. J. Coleman.
H. C. Farmer.
L. Pugh.
E. J. Harrison.
R. T. Kennedy.
D. C. Hodge.
H. A. Hogarth.
W. R. Helm.
T. L. Marshall.
J. N. Aylwin.
P. O. G. Wakeham.
T. E. S. Thwaite.
A. Bailey.
C. E. W. Boreham.
J. G. Clementson.
P. W. Dawney.
A. H. Farmer.
W. H. Kinnimonth.
O. H. Leicester.
J. L. Morgan.
C. L. Morris.
E. Oakley.
D. Roth.
R. Shaw.
T. F. Thomson.
Anne M. O. Trouton.
N. Willis.
W. G. Wright.

THE FINAL EXAMINATION.

The Final Examination, qualifying for candidature as Associate R.I.B.A., was held in London from December 1 to 9, and in Edinburgh from December 1 to 8, 1926. Of the 38 candidates examined (3 of whom took Part I only), 21 passed (3 in Part I only), and 17 were relegated. The successful candidates are as follows:—

G. E. Bunce.
T. A. Collins.
A. Craig.
G. F. Evans-Vaughan.
W. H. Ford (Part I only).
A. H. Gardner.
A. E. J. Goodall (Part I only).
F. G. Goodin.
R. H. Graddon.
R. N. Guy.
A. J. Hobbs.
A. T. Hope.
F. L. Jackman.
J. E. Lancashire.
H. W. E. Lindo.
C. S. Morley.
H. Overnell.
H. Savage.
L. R. Stedman.
W. L. Ward (Part I only).
F. J. Watson.

THE SPECIAL EXAMINATION.

The Special Examination, qualifying for candidature as Associate R.I.B.A., was held in London from December 1 to 7, 1926. Of the 22 candidates examined (1 of whom took Part I only), 12 passed (1 in Part I only), and 10 were relegated. The successful candidates are as follows:—

J. A. Black.
J. Creese.
E. E. Edmunds.
E. E. Fowler.
C. W. Glass.
J. Harrison.
F. H. N. C. Kemp.
A. F. Lodge.
A. Lomax.
C. A. L. Morant (Part I only).
J. E. Salisbury.
E. R. Taylor.

EXAMINATION IN PROFESSIONAL PRACTICE FOR STUDENTS OF SCHOOLS OF ARCHITECTURE RECOGNISED FOR EXEMPTION FROM THE FINAL EXAMINATION.

The Examination was held in London on December 7 and 9, 1926. Twenty-five candidates were examined, all of whom passed. The successful candidates are as follows:—

H. M. A. Armitage.
A. V. Banks.
H. A. Barton.
Kathleen O. Brayshaw
A. D. R. Cowley.
R. P. Cummings.
W. R. H. Curtis.
R. W. Elder.
L. P. Ellicott.
Sylvia C. Gray.
Jessie M. Greig.
R. G. Grice.
Amy M. Hargroves.
F. W. Harper.
G. A. Jellicoe.
H. A. Johnson.
J. W. S. Monson.
F. Napolitano.
C. H. Short.
J. F. Leopold de Silva.
Z. Sirotkin.*
A. Sleigh.
H. G. C. Spencely.
A. C. Todd.
J. B. Wride.

*This candidate is not a British subject, but has taken the examination for a certificate to that effect.

The Special Examination in Design for former Members and Candidates of the Society of Architects to qualify for the Associateship was held in London from December 1 to 6, 1926. Of the two candidates examined, one passed and one was relegated. The successful candidate is J. Cannell.

The Final Examination.

ALTERNATIVE PROBLEMS IN DESIGN, 1927.

We have received from the Board of Architectural Education a list of R.I.B.A. Problems in Design for the year ending December 31, 1927. Copies of the list may be obtained free on application at the R.I.B.A.

XCI.

(*a*) A design for a Maternity and Infant Welfare Centre.

(*b*) Working drawings for Subject No. LXXXIX (*a*), A Small Housing Scheme.

XCII.

(*a*) A design for a Covered Bridge.

(*b*) Working drawings for Subject No. XC (*a*), A Concert Hall.

XCIII.

(*a*) A design for a Sports Pavilion and Centre.

(*b*) Working drawings for Subject No. XCI, A Maternity and Infant Welfare Centre.

XCIV.

(*a*) A design for an Open Air Swimming Bath.

(*b*) Working drawings for Subject No. XCII, A Covered Bridge.

XCV.

(*a*) A design for a Vicarage.

(*b*) Working drawings for Subject No. XCIII, A Sports Pavilion and Centre.

XCVI.

(*a*) A Small Housing Scheme.

(*b*) Working drawings for Subject No. XCIV, An Open Air Swimming Bath.

DATES FOR SUBMISSION OF DESIGNS IN 1927.

Subj. XCI ..	28 Feb.	Subj. XCIV. ..	31 Aug.
„ XCII ..	30 Apr.	„ XCV ..	31 Oct.
„ XCIII ..	30 June	„ XCVI ..	31 Dec.

COUNCIL MINUTES.

Architectural Education.—On the recommendation of the Board of Architectural Education the Council decided that no Student should be admitted to candidature for the Associateship without having had at least one year's office or equivalent practical experience.

Examinations.—The following results were reported to the Council:—

	Examined.	Passed.	Relegated.
Final and Special, July, 1926	77*	51†	26
Professional Practice, July, 1926..	37	33	4
Special Examination in Design for Society of Architects, Candidates, &c., July, 1926	9	8	1
Intermediate, June, 1926	94	56	38
Town Planning, July, 1926	2	—	2
Statutory Examination, October, 1926—			
(District Surveyor)	8	4	4
(Building Surveyor)	2	—	2

* 6 Part 1 only; 3 Part 2 only.
† 3 Part 1 only; 2 Part 2 only.

Recognised Schools.—The R.I.B.A. Silver Medal for Schools of Architecture recognised for exemption from the Final Examination was awarded to J. Morrison, School of Architecture, Robert Gordon's Colleges, Aberdeen.

The R.I.B.A. Bronze Medal (and £5 in Books) for Schools of Architecture recognised for exemption from the R.I.B.A. Intermediate Examination was awarded to Mr. E. B. O'Rorke, Architectural Association School of Architecture.

R.I.B.A. Maintenance Scholarships.—The Board of Architectural Education reported the award of R.I.B.A. Maintenance Scholarships as follows:—

E. L. W. Davies (Colchester), £100 per annum for three years.
B. I. Day (Bideford), £100 per annum for three years.
E. J. White (Hull), £100 per annum for three years.
H. Jackson (Birmingham), £50 for the first year, £60 for the second year, £75 for the third year.
A. K. Brown (Sunderland), £50 for one year.
J. O. Wylson (Kent), £100 per annum for three years (Artists' General Benevolent Institution).

R.I.B.A. PRIZES AND STUDENTSHIPS.

Tite Prize.—The report of Mr. D. Beaty-Pownall, Tite Prizeman 1925, was approved.

Owen Jones Studentship.—The report of Mr. E. Dinkel, Owen Jones Student 1926, was approved.

R.I.B.A. (Anderson and Webb) Scholarship at the Cambridge University School of Architecture.—The award of the R.I.B.A. (Anderson and Webb) Scholarship to Mr. J. T. Alliston was approved.

R.I.B.A. (Archibald Dawnay) Scholarships.—The following awards were approved:—

(i) *Second Years of Scholarships.*—(*a*) An R.I.B.A. (Archibald Dawnay) Scholarship of £75 for the year 1926–1927 to R. P. Cummings (School of Architecture, Architectural Association). (*b*) An R.I.B.A. (Archibald Dawnay) Scholarship of £50 for the year 1926–1927 to W. R. Brinton (School of Architecture, Architectural Association).

(ii) *First Year of Scholarships.*—(*a*) An R.I.B.A. (Archibald Dawnay) Scholarship of £75 for the year 1926–1927 to C. W. Preston (School of Architecture, Architectural Association. (*b*) An R.I.B.A. (Archibald Dawnay) Scholarship of £50 for the year 1926–1927 to E. B. O'Rorke (School of Architecture, Architectural Association).

Studentship.—The following were elected as Students of the R.I.B.A.:—

H. Bramhill, Liverpool (Univ. of Liverpool).
A. D. R. Cowley, Cheshire (Univ. of Liverpool).
A. J. Davidson, Sefton Park, Liverpool (Univ. of Liverpool).
R. Dilworth, Moss Side, Manchester (Special Exemption).
R. G. Grice, Bootle, Cumberland (Univ. of London).
Amy M. Hargroves, Golders Green, N.W.11 (Univ. of London).
G. C. Hough, Hoylake, Cheshire (Univ. of Liverpool).
J. L. Hughes, Wavertree, Liverpool (Univ. of Liverpool).
Abdulla M. Peermahomed, c/o Architectural Assoc., 34, Bedford-square, W.C.1 (Architectural Assoc.).
H. H. Powell, New Brighton, Cheshire (Univ. of Liverpool).
A. Sleigh, W.C.1 (Architectural Assoc.).

University of London Architectural Education Committee.—Mr. Arthur Keen and Mr. Maurice E. Webb were re-nominated as representatives of the R.I.B.A. on the University of London Architectural Education Committee for the year 1927–1928.

The Architects' Defence Union.—The Council agreed to lend an additional sum of £100 to the Architects' Defence Union for organisation expenses.

Membership.—Applications for Membership were approved as follows:—Fellowship, 19 applications; Associateship, eight applications; Hon. Associateship, one application; Hon. Corresponding Membership, three applications.

The Smithson Drawings.—On the recommendation of the Literature Standing Committee it was decided to purchase the Smithson drawings for the Library and to call the collection "The Grissell Collection of Smithson Drawings."

Resignations.—The following resignations were accepted:—Mr. M. S. R. Adams, A.R.I.B.A., Mr. T. S. Darbyshire, A.R.I.B.A.

SIR JOHN VANBRUGH'S DESIGN FOR THE COMPLETION OF GREENWICH HOSPITAL

BY ARTHUR T. BOLTON, F.S.A.

THE special exhibition this summer, in the Architectural Library of Sir John Soane's Museum in Lincoln's Inn-fields, of drawings and sketches relating to an early design by Sir John Vanbrugh for the completion of Greenwich Hospital, having aroused much interest, the proprietors of *The Builder* commissioned Mr. T. Raffles Davison to make the drawing, which we illustrate this week and which gives a pictorial representation of the general effect of the design, as it might have been, if carried out in the days of Queen Anne. The scale is so vast that it must be explained that the diameter of the main order is half as large again as that of St. Paul's. The actual width of the centre portico is the same as the great decostyle of University College in Gower-street. The oval forecourt is roughly 360 by 230.

If, however, we transport ourselves back to 1702, the year of Queen Anne's accession, the design will not appear fantastic. Castle Howard and Blenheim illustrate the temper of the time, when the power of Louis XIV was being boldly challenged and broken.

The rise of Sir John Vanbrugh presents analogies with that of Wren himself a generation earlier. There is reason to think that King William, reputed as a great judge of men, very early recognised the genius of Vanbrugh. It is well known how he insisted on the employment of Marlborough, in spite of detected treachery, realising his military gift. It is doubtful if Wren, who had been the favourite of Queen Mary, ever really stood in the same relation with Anne. Vanbrugh belonged to the Marlborough group, and it seems early to have been decided to bring him into the Office of Works as a possible successor to the Surveyor, now some 70 years of age.

The greatness of mind of Wren is revealed as much in his relations with the men of his time as in his works. The idea of jealousy between the two men, young and old, may be disregarded, and we may believe that Wren, realising the similarity of his own incursion into architecture, freely recognised the genius of Vanbrugh. The circumstances of the time tied Wren closely to the long-delayed completion of St. Paul's, besides the unending attendance on the Privy Council, Treasury and Office of Works. There was, therefore, very good reason why Wren should be content to let Vanbrugh and Hawksmoor carry on at Greenwich under his general authority. If, accordingly, the buildings at Greenwich are studied with a fresh eye it must be clear to whom the work as it stands is mainly due. The writer has been drawn into the subject of Greenwich Hospital, as part of the programme of the Wren Society, as a volume of drawings will be devoted to it in 1929.

The subject is admittedly very complicated. The great scheme illustrated in Mr. Raffles Davison's drawing has been restored from some fragmentary drawings, only identified by a happy guess, though now fully confirmed as to subject. In point of date there is a narrow margin between 1702 and, say, three years before 1715. The latter date is that of the publication of "Vitruvius Britannicus," by Colin Campbell, whose work must have taken two or three years to produce.

Colin Campbell does not give this design, but a much simpler version, an isolated domed chapel without forecourt. Most significant of all, he mentions no architect's name, whereas in giving his plates of Blenheim he thanks Vanbrugh for the loan of his drawings and for his having besides corrected the copper plates to the work as built. Obviously Campbell knew perfectly well that Vanbrugh and Hawksmoor were carrying on Greenwich under the general authority of Wren as Surveyor-General. One of the most important features of the case is that we can now place Vanbrugh in such a relation to the school that Wren had got together during his generation, that it becomes possible to understand how Castle Howard and Blenheim could have been built in any reasonable time and in a practical manner.

This year's (1927) volume of the Wren Society, in dealing with Hampton Court, will give a series of documents illustrating Wren's relations with his staff, and it may be suggested Vanbrugh was a pupil of even more independence than usual.

The subject is most attractive, and in conclusion it may perhaps be explained that the radial buildings in the illustration comprise four wards with houses for officers, &c. The two fountains have been introduced, taking a design for a monument—to the victory of Blenheim (?)—as a basis. The lay-out of the paving of the forecourt follows good examples. Only the west elevation of the chapel existed, half-drawn, and there was no section. The central feature is a development of a rough sketch. Everybody must be struck with the general analogy of the grouping of the long lines of the oval court, and the central raised mass of the portico of the antechapel with the general lines of Castle Howard of the same date.

REGISTRATION OF ARCHITECTS

THE Registration Bill having been unanimously adopted at the R.I.B.A. meeting on December 13, steps are now being taken to obtain from Members of Parliament a promise of support and an undertaking to ballot for the Bill on the re-assembling of Parliament on February 8, 1927. The Registration Committee is inviting the allied societies to co-operate by taking immediate action on the following lines:

(*a*) To approach all the Members of Parliament in the constituencies in their areas, sending them copies of the Memorandum to M.P.'s (a copy of which we have received), and of the Registration Bill.

(*b*) To send to the Registration Committee before January 17, 1927, a list of the Members of Parliament who have been approached, with a note of the results whether favourable or unfavourable, and of any promises to ballot for the Bill.

The Memorandum points out that the Bill is a measure in accordance with the general policy of other countries and of our own Dominions, and will not interfere with anyone at present in *bona fide* practice as an architect. It is also urged that it will be a potent factor in the movement for preserving the amenities of our towns and countryside. "The recent formation of the Council for the Preservation of Rural England," it is stated, "and the suggestions which have been made in connection therewith, are a proof of the necessity for creating and maintaining a body of competent architectural practitioners, to any of whom local authorities and other public bodies or individuals can turn for advice and assistance in carrying out town and regional planning schemes, thus securing the preservation of the countryside and the prevention of its spoliation by the eyesores now being erected in such numbers. The public who are so keenly interested in this matter at the present time will undoubtedly welcome the Architects' Registration Bill as a measure which will benefit the community."

The Memorandum is signed by Mr. E. Guy Dawber, F.S.A., President of the R.I.B.A., and by Messrs. H. S. Rogers, M.A., F.S.A. F.R.I.B.A., President of the Berks, Bucks and Oxon A.A.; Holland W. Hobbiss, A.R.I.B.A., President of the Birmingham A.A.; E. F. Hooper, L.R.I.B.A., President of the Devon and Cornwall Architectural Society; Sir William W. Portal, Bart., M.A., Hon. A.R.I.B.A., President of the Hampshire and Isle of Wight Association of Architects; Col. Albert E. Kirk, O.B.E., A.R.I.B.A., President of the Leeds and West Yorkshire Architectural Society; Edward T. Allcock, F.R.I.B.A., President of the Leicester and Leicestershire Society of Architects; Prof. C. H. Reilly, O.B.E., M.A., F.R.I.B.A., President of the Liverpool Architectural Society; H. S. Fairhurst, F.R.I.B.A., President of the Manchester Society of Architects; E. T. Boardman, F.R.I.B.A., President of the Norfolk and Norwich Association of Architects; J. W. Fisher, F.R.I.B.A., President of the Northamptonshire Association of Architects; Lieut.-Col. G. Reavell, O.B.E., F.R.I.B.A., President of the Northern A.A.; H. A. Dickman, F.R.I.B.A., President of the Nottingham and Derby Architectural Society; G. P. K. Young, F.R.I.B.A., President of the Incorporation of Architects in Scotland; James B. Nicol, President of the Aberdeen Society of Architects; T. M. Cappon, F.R.I.B.A., President of the Dundee Institute of Architects; F. C. Mears, President of the Edinburgh A.A.; Jas. K. Hunter. F.R.I.B.A., President of the Glasgow Institute of Architects; Thomas Munro, President of the Inverness A.A.; F. E. Pearce Edwards, F.R.I.B.A., President of the Sheffield, South Yorkshire and District Society of Architects and Surveyors; C. F. Ward, F.R.I.B.A., President of the South Wales Institute of Architects; John Seeds, President of the Ulster Society of Architects; George C. Lawrence, R.W.A., F.R.I.B.A., President of the Wessex Society of Architects; C. F. W. Dening, R.W.A., F.R.I.B.A., President of the Bristol Society of Architects; Col. N. H. Waller, M.C., M.A., L.R.I.B.A., President of the Gloucestershire A.A.; J. M. Dossor, F.R.I.B.A., President of the York and East Yorkshire Architectural Society.

Voluntary Register of "Unattached" Architects.

The Registration Committee of the R.I.B.A., with the approval of the Council, has opened a voluntary register of persons who, not being members of the R.I.B.A. or of any of its Allied Societies, desire to have their registration qualifications recorded in view of the intention of the R.I.B.A. to promote a Bill for the Registration of Architects. The object of the voluntary register is to provide and maintain, with the registers of the R.I.B.A. and of its Allied Societies, a complete record of persons in *bona fide* practice as architects, either as principals or assistants, in England, Scotland, Wales, and Northern Ireland.

While there is no charge for record in the register and such record does not involve any obligation on the part of the persons registered, or the R.I.B.A., or the Registration Committee, the existence of such a register in the event of a Registration Act coming into force in this country will, it is pointed out, greatly expedite and facilitate the machinery of registration. The register will be subject to revision and amendment from time to time and the Registration Committee reserves the right to discontinue the system of voluntary registration at any time, and in the event of a Registration Act coming into force the voluntary register will be discontinued.

Particulars for record in the register should be entered on one or other of the forms which have been issued, which, when filled in and signed by the applicant, should be deposited with the Secretary of the R.I.B.A. Registration Committee, at 28, Bedford-square, London, W.C. 1.

Seventeenth-Century Gateway.

A stone gateway from Ascott Park, Stadhampton, Oxfordshire, the gift of Sir Paul Makins, has just been installed in the Victoria and Albert Museum. The gateway, which is early seventeenth century, was originally provided with wooden gates, which, having rotted, were replaced by the present eighteenth-century gates and lunette in wrought iron. The gates were built into a stone archway let into a brick wall. The stone setting and the remains of the brick wall also have been preserved and set up in the Museum. There is an inscription on the stone archway: *Si bonus es intres, si nequam nequaquam.*

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ILLUSTRATIONS

Greenwich Hospital.

An article on the Greenwich Hospital illustration (inset), by Mr. Bolton, is given on page 9.

The Spa Royal Hall, Bridlington.

The building of the new Royal Hall at the Spa, Bridlington, was begun on January 15, 1926, and the Hall was opened to the public on July 15. Out of this period of six months, six weeks were occupied in the preparation of the foundations which, owing to the nature of the site, necessitated the driving of 150 piles through the sand and clay to an average depth of 25 ft., until reaching the chalk sub-stratum. At the date of the opening the whole contract was not entirely completed, but for all general purposes the buildings were complete, the main hall itself being entirely finished and even the decorations carried out.

The foundations are of reinforced concrete constructed above the piling already mentioned. Built up from this foundation work is a steel framework for the hall, which arrangement enabled the steelwork to be carried out at the same time as the walling was being constructed. The steelwork to the building amounted to 240 tons, and was carried out complete from the date of the order, including all preparation and erection, in ten weeks. The walls throughout are of the cavity type, concrete brick being used externally and silica bricks internally, tied together with wall ties. This class of brick was used in the building by reason of the Government embargo on the use of ordinary bricks as a condition in connection with the granting of a loan for this type of building. Externally the whole of the walling is treated with stucco facing. A plinth of unpolished granite is provided to a height of 18 in., to obviate the otherwise dirty appearance usually found in stucco work carried down to the ground.

Internally the walls are plastered and finished in an enriched fibrous plaster treatment. The centre of the ceiling has been made a special feature by means of a steel-framed dome, 36 ft. in diameter, glazed with leaded lights.

The balcony is carried out in steel construction, with the flooring of pre-cast concrete beams, floated up with an asbestos composition and finally finished with "Duroleum." The terrace of the ground floor, immediately below the balcony is similarly treated. The dance floor is constructed on the "Valtor" spring system, provided with locking gear, so that it may be made stable when the hall is being used for concerts. The dance floor itself is formed of 3 in. by 1 in. maple flooring with mitred angles. When the hall is used for concerts the whole of the maple floor is covered with a canvas material. The floors of the foyer, crush halls, cloakrooms and lavatories are all carried out in terrazzo.

The whole of the fittings are of wire network covered with painted fabric. The lamps inside this fabric are of different colours wired independently, the wiring being so arranged as to provide thirty-two different combinations of colour effects. A special switchroom is provided in connection with the lighting and all the lights are arranged through dimmers. Two limelight boxes are also provided, the projection of the limelights being from the two side walls and near the ceiling level, and so arranged that the lights will cover the whole of the dance floor. The heating is carried out on the low pressure hot-water system, and an independent boiler is provided for the hot water supply to the lavatories. All exposed woodwork is carried out in French polished mahogany.

It was decided that the orchestra platform and the musicians' room should be carried out so as not to form part of the structure of the building and that the platform should stand out in the hall itself giving the appearance of a large piece of furniture. The whole structure is carried out in polished mahogany.

The whole of the purlin constructed framework of the roof is covered with grooved and tongued boarding and then with a special felting, all the joints being ironed so as to make the entire roof watertight. The roof covering is completed by lathing over the felting and finally covering with russet brown asbestos tiles laid with square joints as in ordinary slating.

A feature of the front elevation overlooking the sea is the series of large steel windows which have been specially constructed to withstand the weather and stress of the storms which are experienced on this front. Each window contains 1½ tons of steel. The windows are glazed with British polished plate glass. Portions of the balcony and ground floor terrace are used as a cafe, and kitchens are located on the ground floor adjacent thereto, with the ground floor and balcony service rooms connected up with two electric service lifts. Offices and other staff rooms are provided in connection with the scheme.

Messrs. Blackmore, Sykes & Co., of Hull, are the architects.

Messrs. Holliday & Barker, of Hull, were the general contractors, and the following were sub-contractors: G. R. Jarvis & Sons, Bridlington, plumbers and glaziers; W. J. Wilson & Son, Mansfield, fibrous plaster work; Geo. Jackson & Sons, Ltd., London, external cement facing; City Electrical Co., Hull, electric wiring and installations; Walter Dodgson, Bridlington, slating to roofs; Kenneth Haller, Hull, painting and decorating; Samuel Butler & Co., Ltd., Leeds, constructional steelwork; Concrete, Ltd., Leeds, concrete pre-cast floors; Trussed Concrete Steel Co., Ltd., Kensington, reinforcing steel for retaining walls, &c.; Richard Hill & Co., Ltd., Middlesbrough, reinforcing steel for floors, &c.; Crittall Manufacturing Co., Ltd., Manchester, standard steel casements; Doodson & Bain, Ltd., Manchester, steel windows; Henry Hope & Sons, Ltd., Birmingham, lantern lights; Kayll & Reed, Leeds, ornamental dome and ceiling lights; A. J. Snelling & Co., Ltd., Hull, heating installation; Hollis Bros. & Co., Ltd., Hull, maple floor to main hall; Francis Morton, Jnr. & Co., London, spring floor installation; Doulton & Co., Ltd., Paisley, sanitary fittings (w.c.'s); William E. Farrer, Ltd., Birmingham, sanitary fittings in lavatory basins, urinals and w.c.'s; Goddard, Walker & Brown, Hull, fireproof door frame (John Tann door); Marble Mosaic Co., Ltd., Bristol, terrazzo floors; Northern Asphalt Co., Ltd., Leeds, asphalting to roofs; The Pennycook Patent Glazing Co., Ltd., Glasgow, patent glazing; Excelsior Rubber & Flooring Co., Ltd., Yorkshire, "Duroleum" flooring; Express Lift Co., Ltd., Westminster, service lifts; Fassio Artificial Marble, London, artificial marble work to foyer; Artistic Shade Co., London, electrical shades; Leeds Fireclay Co., Ltd., Hull, wall tiling; Mateer, Dunn & Nelson, Hull, locks, door and window furniture, spring, &c.; King & Co., Ltd., Hull, turnstile and collapsible gates; Rd. Johnson & Sons, Ltd., Hull, bronze tablet recording opening ceremony; Raines & Porter, Ltd., Hull, "Velmat" oil flat paint; Sissons Bros., Ltd., Sculcoates, Hull, "oil flat" paint; Sangwin, Ltd., Sculcoates, Hull, piling works; Shackleton & Son, Goole, granite plinth; National Radiator Co., Ltd., Hull, radiators and boilers for heating apparatus; Horace Mills, Ltd., Durham, seating.

Bradford Cathedral.

We publish in this issue some drawings illustrating Sir Charles Nicholson's proposals in connection with the provision of a new Bradford Cathedral. It was fully recognised before the Bradford Bishopric was founded seven years ago that the old Parish Church was not adequate for diocesan purposes. To all intents and purposes it is still the Parish Church. The Vicar desires to establish for the diocese a church which shall be a cathedral both in name and fact, and which shall be comparable with the great cathedrals of the country. It should be specially pointed out that the present building—other than the demolition of the north wall—will exist as it is now in the new Cathedral; it will simply be incorporated in the greater structure without losing its identity. To carry out the scheme it will be necessary to raise a sum of between £150,000 and £200,000.

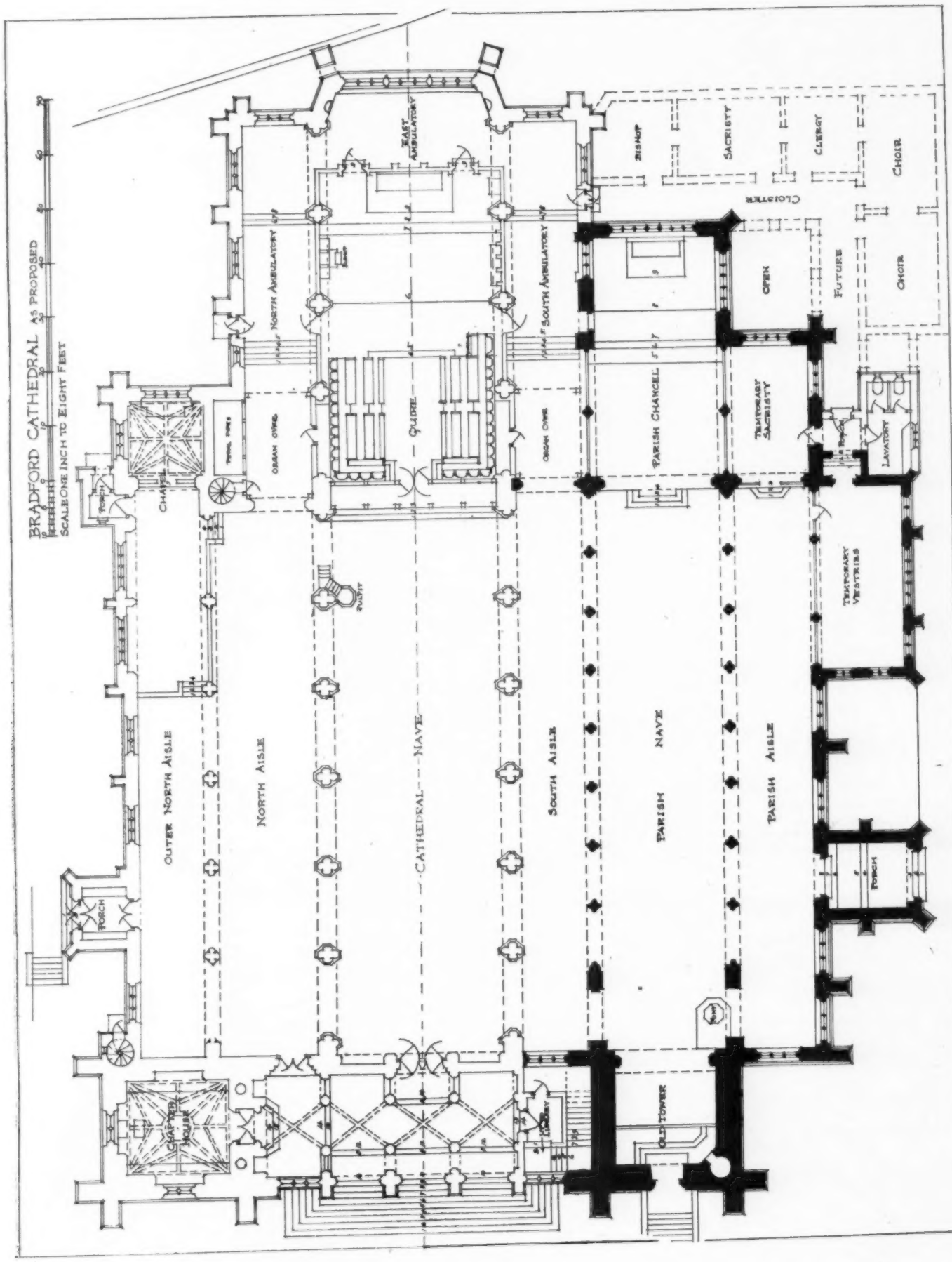
New Factory, Wembley.

This factory, which has been designed for Messrs. Wm. Wrigley Jr. Company, of Chicago, U.S.A., constitutes something of a record in speed of design, in that within four weeks of the arrival of Messrs. Wrigley's representative from America, a site had been selected, plans drawn up, quantities prepared, builders' estimates obtained, and a start actually made on the work. The construction of the building is reinforced concrete on the mushroom principle. A portion of the large floor area is to be finished in maple flooring. All the lavatories are to be finished with glazed tiles. In designing the building great care was taken to see that the process of manufacture was carefully arranged to provide a direct route through the building from the receiving department for raw material to the despatch department. The building is served by sidings from the main line with all up-to-date equipment for loading and unloading.

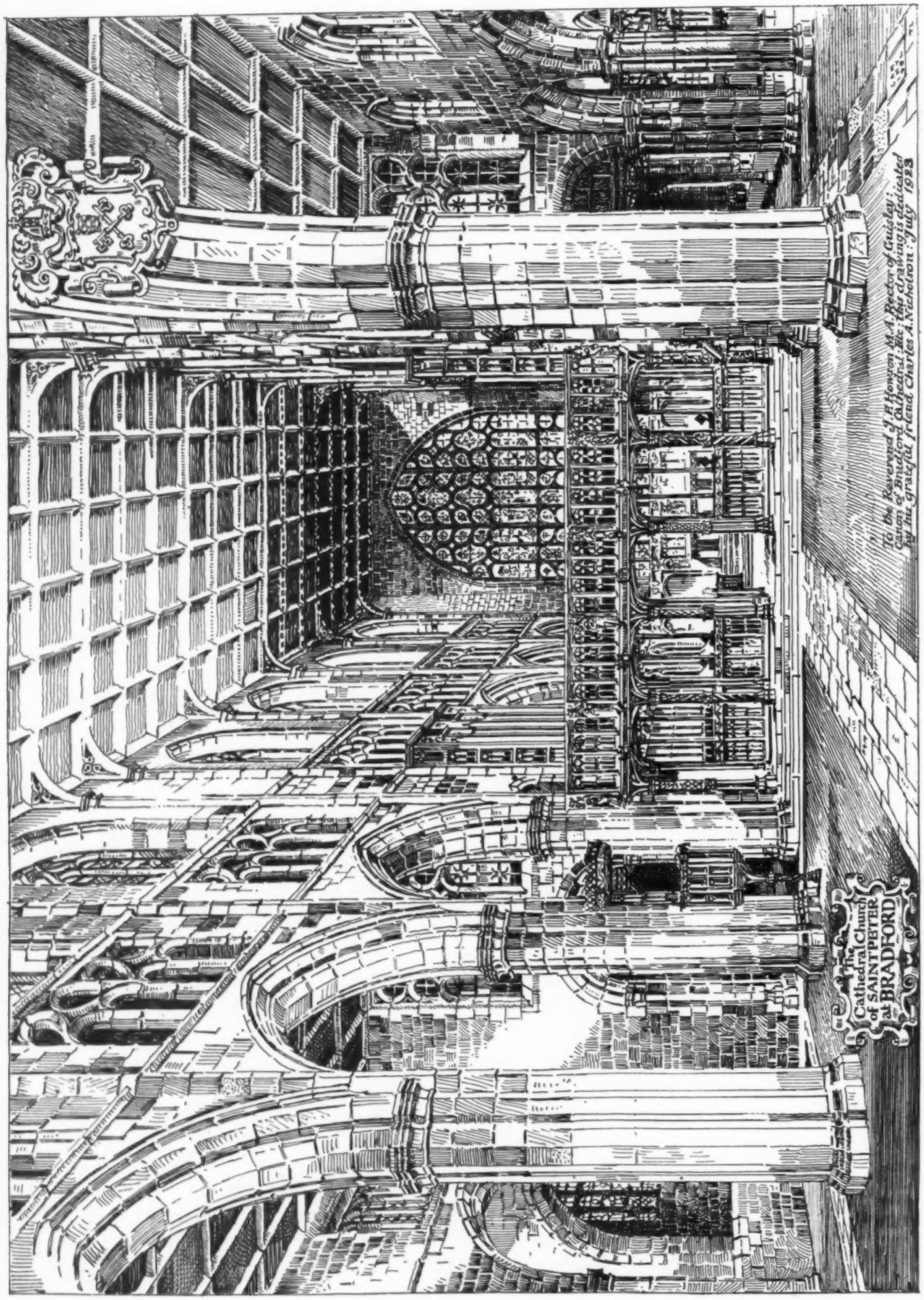
The building work is being carried through by Messrs. A. Roberts & Co., Ltd., contractors, of Earl's Court-road, Kensington, under the supervision of the architects, Messrs. Wallis, Gilbert & Partners, of 29, Roland Gardens, S.W.7, assisted by Wrigley's own engineer, Mr. Wilson. The sub-contractors are: Henry Hope, sashes; Dutton & Co., heating; Carrier Engineering Co., conditioning and engineering; Trussed Concrete Steel Co., Ltd., reinforced steel; Limmer & Trinidad Lake Asphalte Co., Ltd., asphalt; Adam & Co., waterproofing; Haywards, Ltd., castings.

Timber-Framed Houses.

We give plans and elevations this week of a block of four two-story houses erected on the L.C.C. estate at Wood-lane, Becontree. Each of these timber-framed houses contains a living-room, scullery and three bedrooms. The framing of external walls is composed of studding erected at the level of the ground floor window sills on a concrete plinth. The partitions on each floor are framed up in studding, while party walls are constructed in 9 in. concrete. Externally the studding is first covered with a sheeting of impervious felt; and weatherboarding, treated with a non-inflammable Stockholm tar preparation, is then nailed through to the studs, and the roof is covered with interlocking tiles. The contractors were Messrs. C. J. Wills & Sons, Ltd., who built to the designs of Mr. G. Topham Forrest, F.R.I.B.A., Chief Architect to the London County Council.



Bradford Cathedral: Plan as Proposed. SIR CHARLES NICHOLSON, F.R.I.B.A., Architect.


To the Reverend J. A Howson M.A. Rector of Guisley;
Canon of Bradford Cathedral &c: this drawing is dedicated
by his grateful friend Charles A. Nicholson: July 1923
The Cathedral Church
of SAINT PETER
at BRADFORD

Bradford Cathedral: Interior of Proposed Chancel.

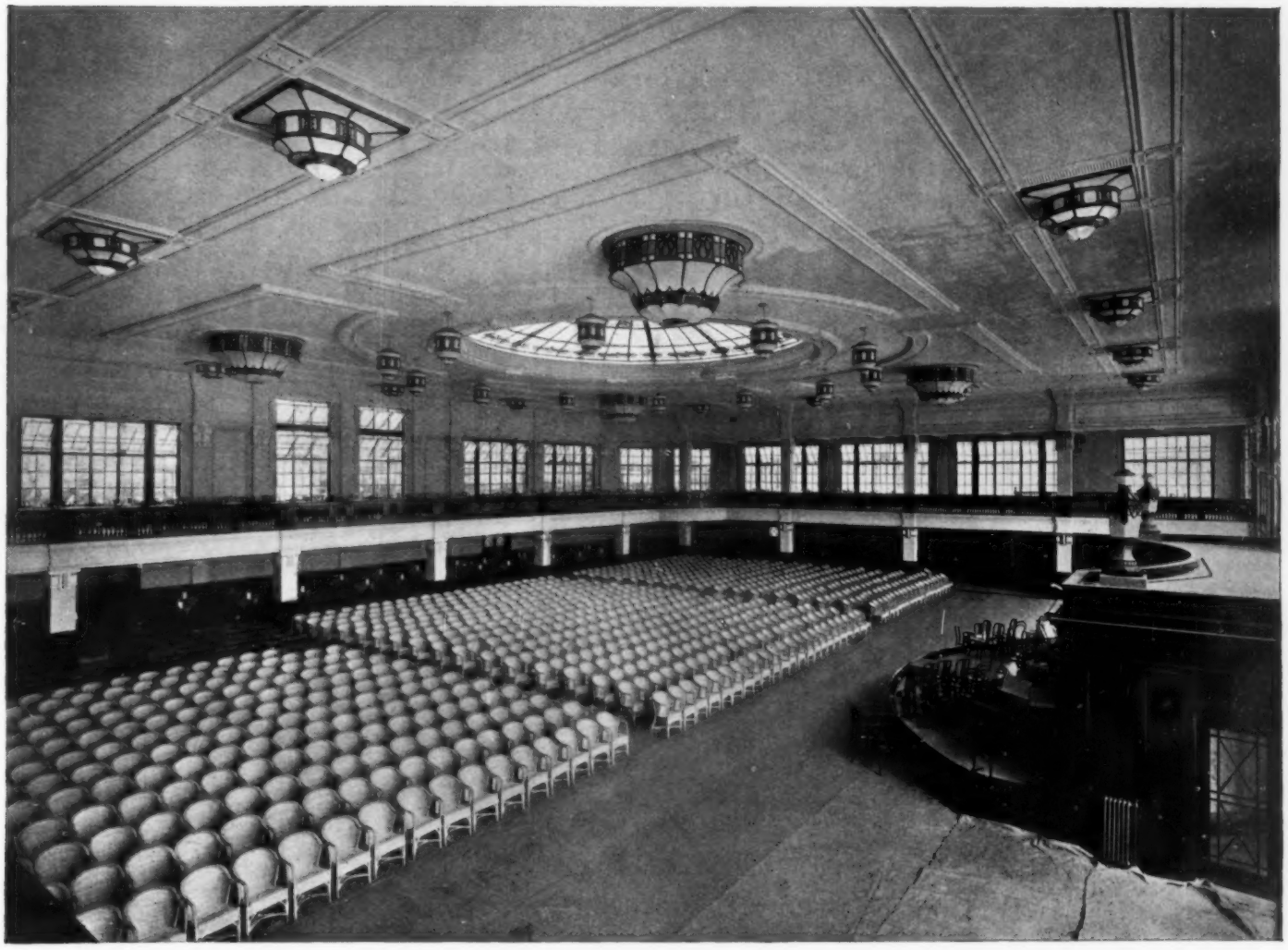
SIR CHARLES NICHOLSON, F.R.I.B.A., Architect.

UNIV. OF MICH.

CRUSH HALL ON FIRST FLOOR.

CENTRAL FEATURE OF FRONT ELEVATION.

The Spa Royal Hall, Bridlington. MESSRS. BLACKMORE, SYKES & CO., Architects.

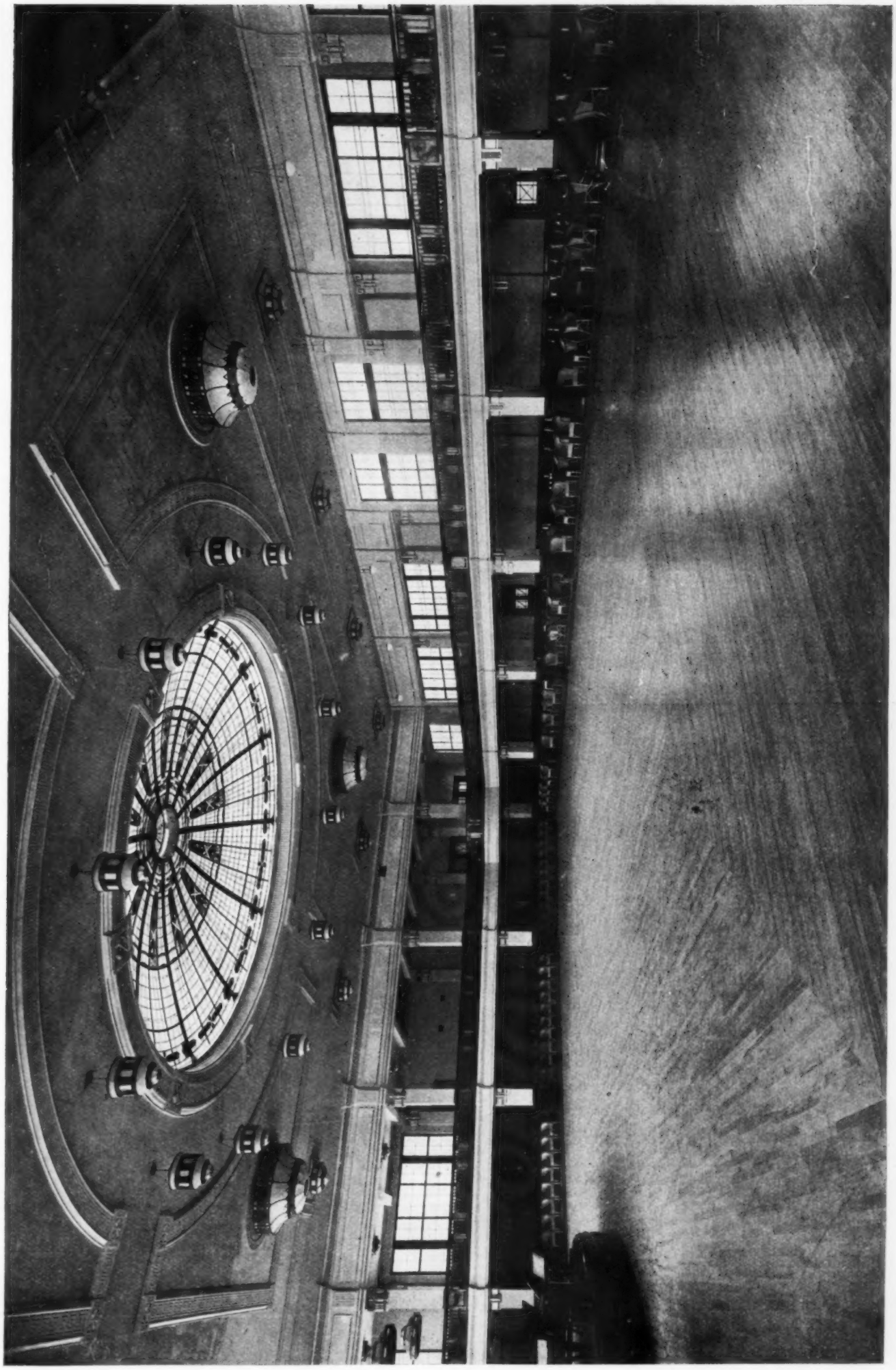


INTERIOR OF HALL WITH SEATING IN POSITION.

FRONT ELEVATION, FROM THE NORTH.

The Spa Royal Hall, Bridlington. MESSRS. BLACKMORE, SYKES & Co., Architects.

UNIV. OF RICH.



The Spa Royal Hall, Bridlington: Interior of Hall, showing Dance Floor, Orchestra, and Balcony

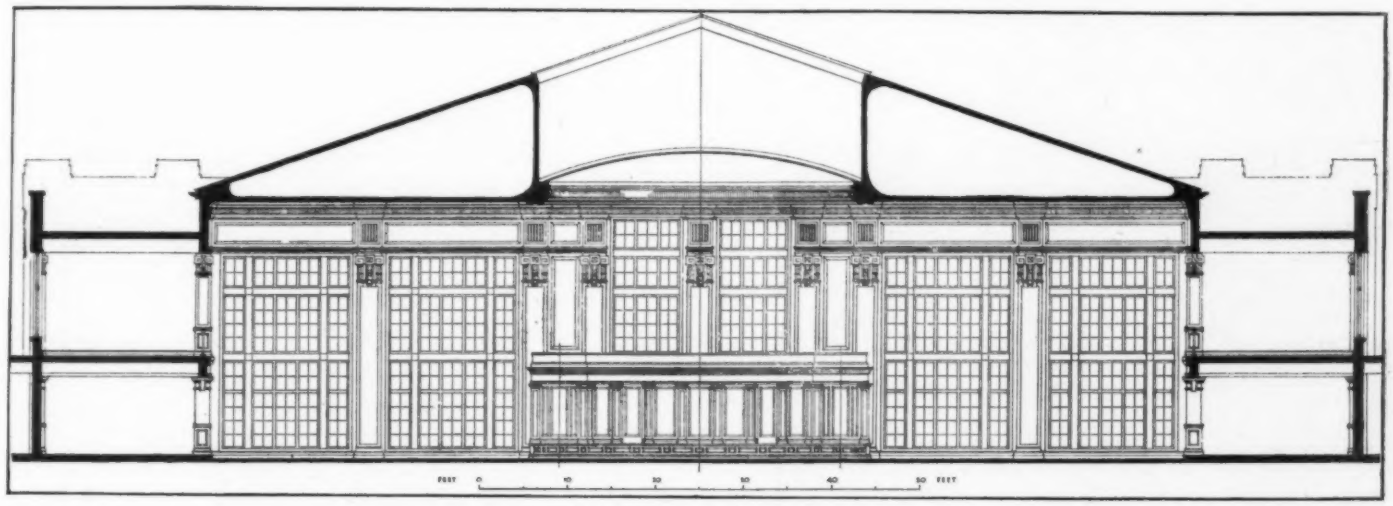
MESSRS. BLACKMORE, SYKES & CO., Architects,

INTERIOR OF FOYER.

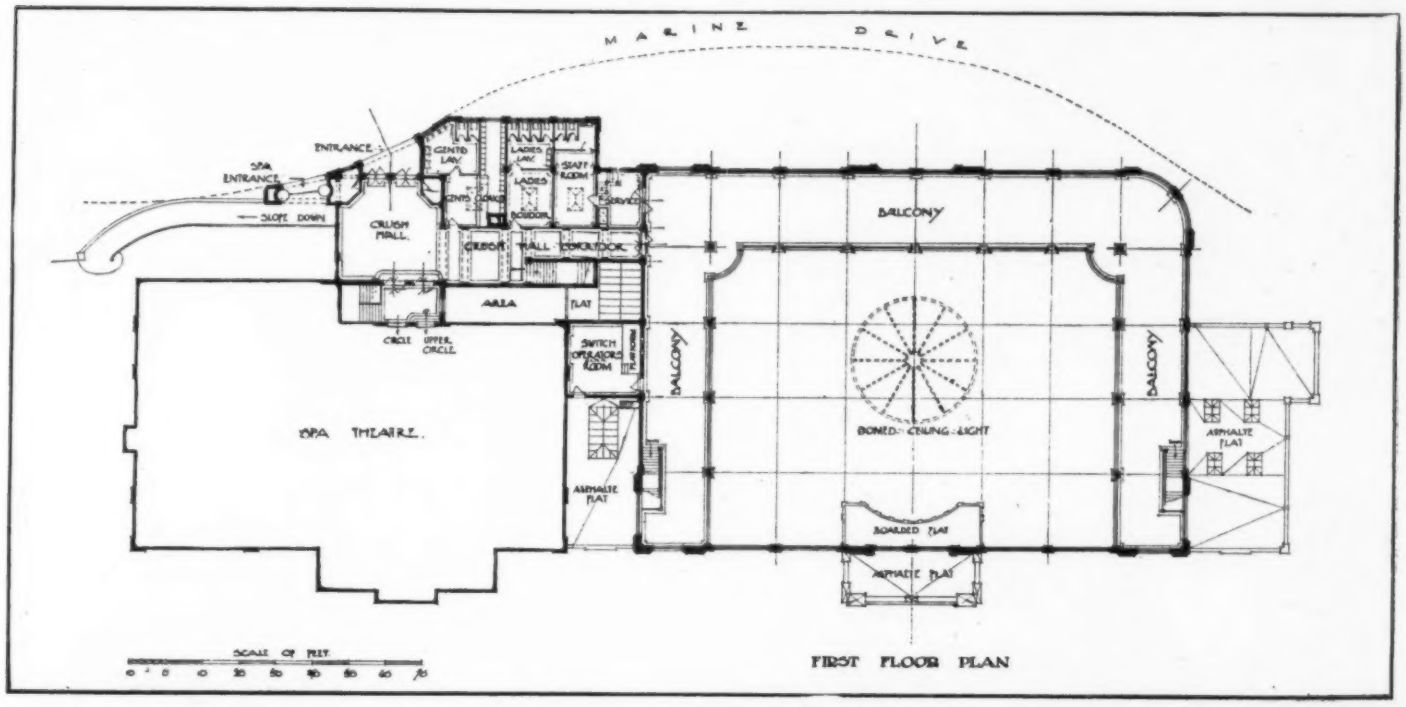
BALCONY.

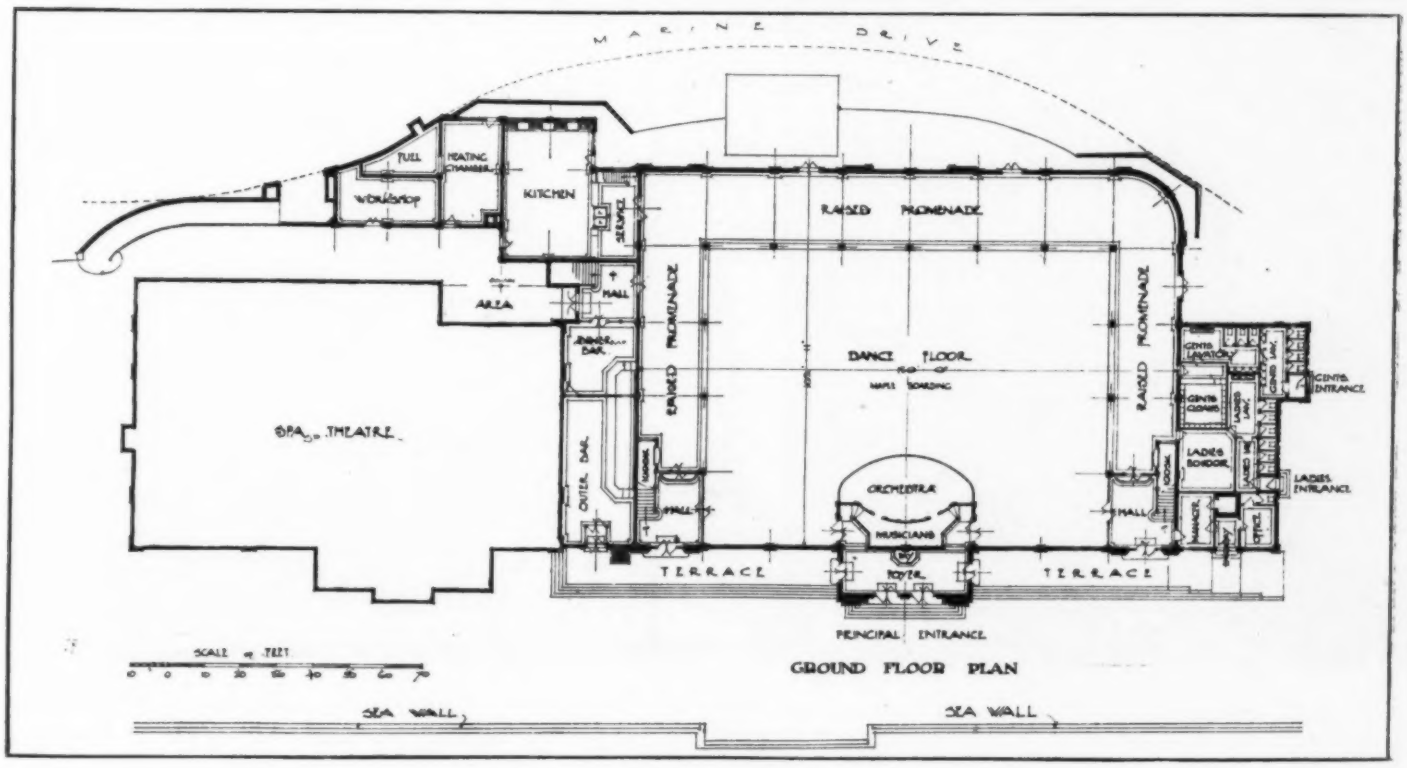
The Spa Royal Hall, Bridlington.

MESSRS. BLACKMORE, SYKES & CO., Architects.



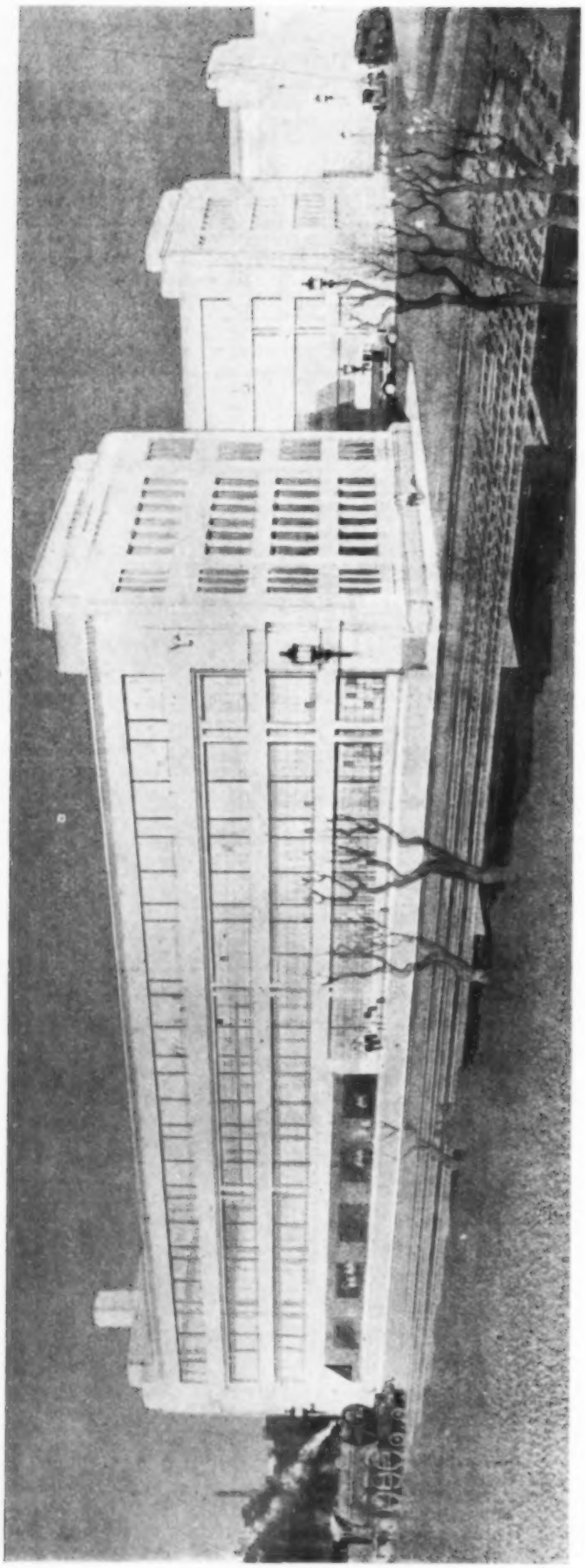
LONGITUDINAL SECTION.



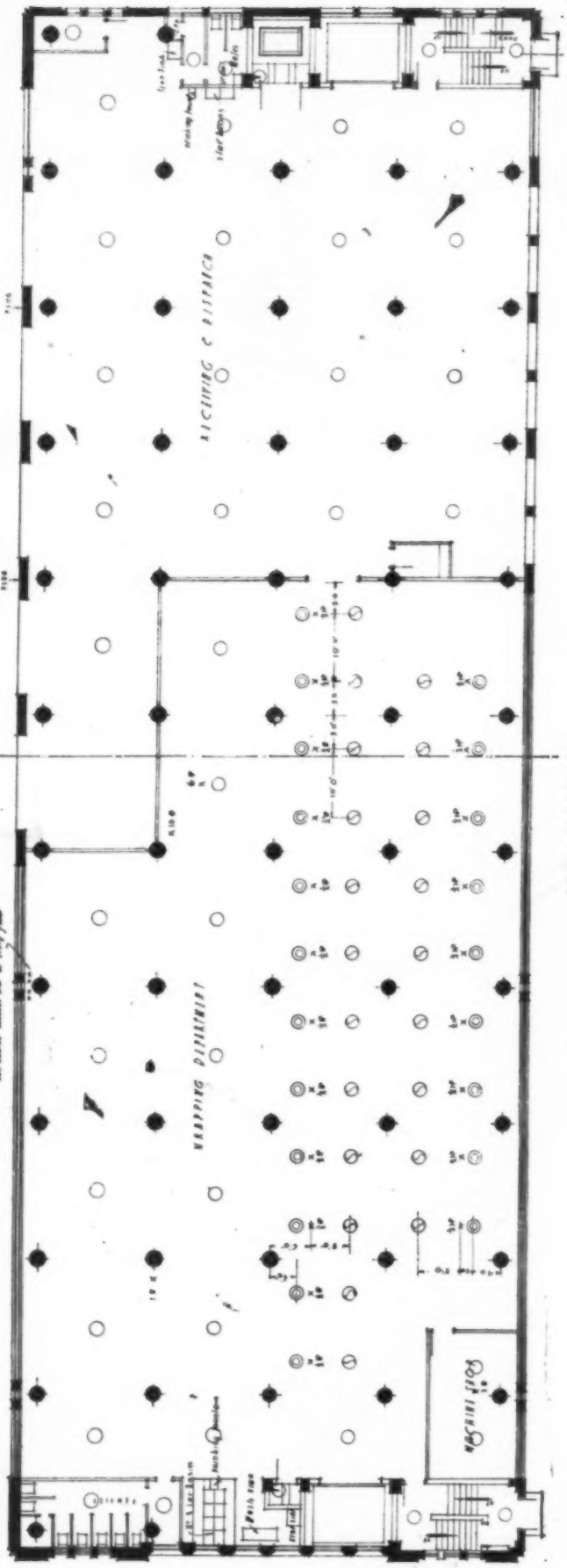


The Spa Royal Hall, Bridlington.

MESSRS. BLACKMORE, SYKES & CO., Architects.

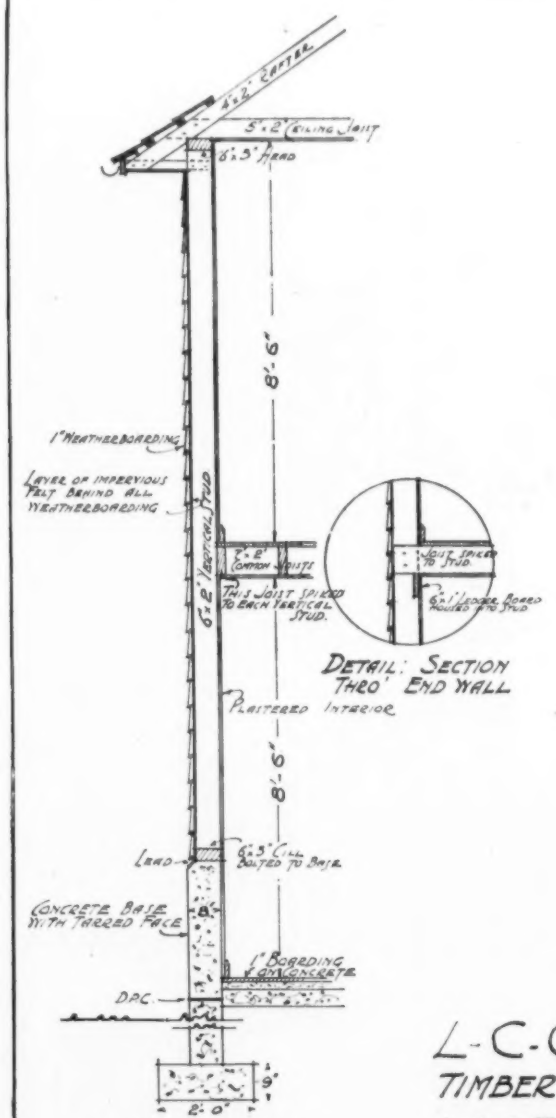


A PERSPECTIVE VIEW.



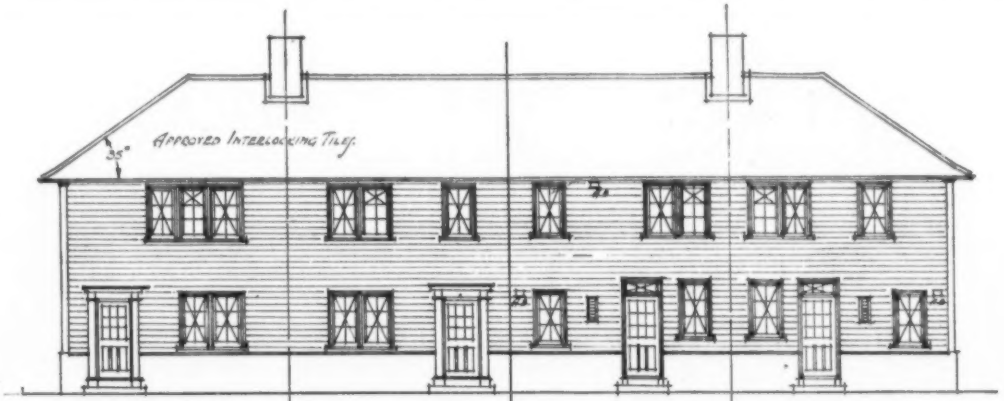
FIRST FLOOR PLAN

Factory at North Wembley. MESSRS. WALLIS, GILBERT & PARTNERS, Architects.

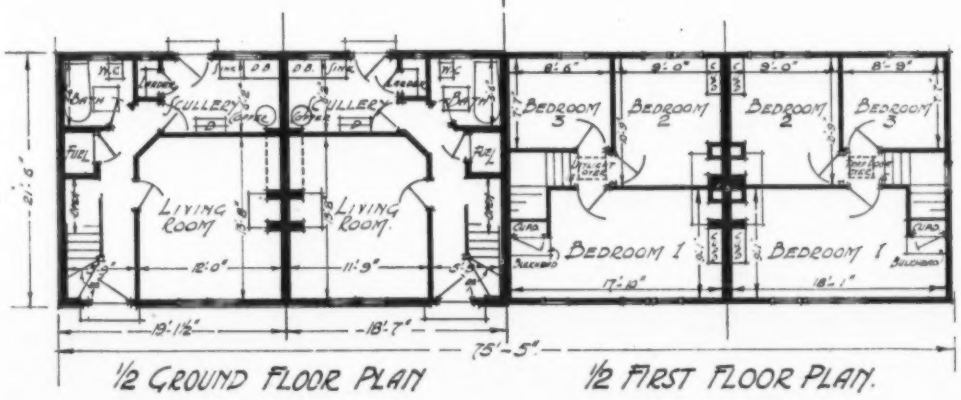


DETAIL: SECTION THRO' END WALL

½ FRONT SECTION THRO' FRONT WALL.



½ FRONT ELEVATION. ½ BACK ELEVATION.



½ GROUND FLOOR PLAN ½ FIRST FLOOR PLAN.

L-C-C. BECONTREE

TIMBER FRAMED COTTAGES.

L-C-C. TYPE - 4 ROOM NON-PARLOUR.

SCALE 0 5 0 10 20 30 FEET

EIGHT FEET TO ONE INCH

W.D. No 82
VALENCE No 7
SECTION.

AREAS.

END COTTAGE		INTER. COTTAGE	
GROUND FLOOR	364·8 S.FT.	GROUND FLOOR	359·6 S.FT.
FIRST FLOOR	364·8	FIRST FLOOR	359·6
TOTAL	729·4	TOTAL	719·0

CUBE.

9730. C.FT. 9466. C.FT.

MEASURED FROM 2'-0" BELOW GROUND FLOOR

ARCHITECT TO THE COUNCIL.

Timber-framed Cottages at Becontree for the L.C.C.

MR. G. TOPHAM FORREST, F.R.I.B.A., Architect to the Council.

CONSTRUCTIONAL STEELWORK SIMPLY EXPLAINED.—XVI

BY OSCAR FABER, O.B.E., D.Sc., M.Inst.C.E., etc.

[EDITORIAL NOTE.—*This series, which will be published in book form later, is intended to present the problem in so simple a form as to be readily understood by those having no special engineering training.*]

CONNECTIONS.—Structural members are connected by fasteners containing either rivets or bolts. The ordinary rivet has a snap head, as shown in Fig. 42. A hole is drilled through the sections requiring to be riveted, and the rivet, as in Fig. 42 (*a*), is inserted, having previously been raised to a red heat. It is then "closed" until it adopts the form in Fig. 42 (*b*). In works this "closing" is generally done by a hydraulic press, taking the form of a

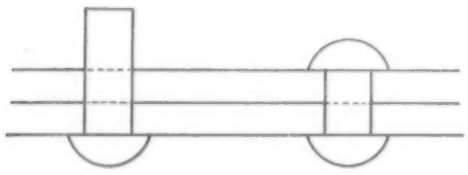


FIG. 42.—SNAP-HEADED RIVETS.

heavy casting of cranked form supporting two cup-shaped jaws, one fixed and the other so arranged that it can be pressed towards the other with a force of about 20 tons exerted by hydraulic pressure, the gap between the two being sufficiently wide to enable ordinary structural sections to be inserted.

On the site this method of closing rivets has practical difficulties, as it requires hydraulic pumps, accumulators and piping to the various portions of the job, and the hydraulic riveter itself is naturally a heavy casting, which can only be carried by a crane. For this reason, rivets on site are generally closed either by hand or with a pneumatic hammer. In either case a large number of blows are delivered on to a cup-shaped tool on the shank of the rivet, the head being, of course, held by a heavy hammer on the other side.

The rivet expands considerably when heated, and it is usual to make the holes $\frac{1}{16}$ in. larger in diameter than the rivet, so that it will easily pass through when hot, thus a $\frac{3}{4}$-in. rivet has $\frac{13}{16}$-in. holes. When the rivet is closed, the first action is to shorten the rivet and make it expand laterally so that it completely fills the hole. After that the energy goes in forming the head. The rivet then cools and, in cooling, contracts and becomes shorter. In so doing it naturally grips very tightly the plates which it is riveting together and produces a great deal of friction between them, which resists relative movement of the plates, quite apart from the shearing strength of the rivet itself.

If we rivet two plates together, as in Fig. 43, and subject these plates to tension in a testing machine, failure occurs by shearing of the rivet, the rivet after failure taking up the form as in Fig. 43 (*b*). It is found that resistance to failure of this kind is directly proportional to the cross-sectional area of the rivet.

For rivet steel we use a relatively soft material, in which the safe shear strength may be taken at $5\frac{1}{2}$ tons per sq. in., so that a $\frac{3}{4}$-in. rivet, having a sectional area of .44 sq. in., will have a shear strength of

$$.44 \times 5\tfrac{1}{2} = 2.4 \text{ tons.}$$

This takes no account of the friction between the plates which is set up by the tension in the rivet produced by its shortening. The amount of this tension depends on a variety of factors, including the temperature of the rivet when it was closed, whether the plates were touching hard or separated by a small space, as sometimes happens owing to a certain spring in them, and whether the rivet was kept closed in the hydraulic ram for a second or two during cooling, which tends to increase the tension in it. If we take the tension in the rivet at 11 tons per sq. in. and the coefficient of friction as $\frac{1}{4}$, then for each square inch of rivet there will be an additional 2.75 tons resisting movement of the plates owing to the friction between them. In this country it is not usual to make any allowance for this friction, but it often accounts for considerable discrepancies between the strength of riveted joints when tested as compared with the strength that we should expect them to give on a basis of the shear strength of the rivet alone.

In the case of rivets which are very long compared with their diameter, the shrinkage of the rivet when cooling may produce tensile stresses so great as to break the rivet, and it is unusual to use rivets longer than five times its diameter. For greater lengths than this, bolts carefully fitted to the holes are generally substituted in first-class work.

The rivet in Fig. 43 will break on a single section, and is therefore said to be in *single shear*. Occasionally, as in Fig. 44, a rivet may be in double shear if the two outer plates are pulling in one direction and the middle plate pulling in the opposite direction. Such a rivet after failure would be as in Fig. 44 (*b*). It requires approximately twice the effort to break a rivet in double shear as compared with single shear, but most regulations require that the strength of a rivet in double shear shall be confined to $1\frac{3}{4}$ the strength in single shear, so that a $\frac{3}{4}$-in. rivet in double shear would carry safely

$$2.4 \times 1\tfrac{3}{4} = 4.2 \text{ tons.}$$

If relatively large rivets are used to rivet together relatively thin plates, it may happen that the force required to shear the rivet is greater than the pressure which the plate will take against the area of the hole without failure of the plate; thus, in Fig. 44 (*b*), if the centre plate is $\frac{1}{2}$ in. thick and the rivet $\frac{3}{4}$ in., the rivet would bear against an area of

$$\tfrac{3}{4} \text{ in.} \times \tfrac{1}{2} \text{ in.} = \tfrac{3}{8} \text{ sq. in.}$$

The total force of 4.2 tons on the rivet would therefore have to be carried on this area, producing a bearing stress of

$$\frac{4.2 \text{ tons}}{\frac{3}{8} \text{ sq. in.}} = 11.2 \text{ tons per sq. in.}$$

Most regulations require this stress to be kept within the limit of 11 tons per sq. in. This is, of course, greater than we normally use on steel in compression, but it is recognised that where an intense stress is very local in its action and disperses rapidly, a greater stress can be allowed safely. Cases where bearing pressure becomes the limiting factors are more likely to occur with rivets in double shear than when they are in single shear, because the load on the rivet, and therefore on the plate, is proportionately greater.

The holes in plates to receive the rivets used to be made by punching. A plate, as in Fig. 45, would be supported on a die containing a circular hole, above which a punch somewhat smaller in diameter than the hole would be applied, and would be forced through the plate, taking with it a piece of the material from the plate, and leaving a hole through the plate of a slightly conical form. In work of low quality the author has seen several punch-holes assembled, as shown in Fig 45 (*b*), with the object of riveting without any further preparation. Even if it were

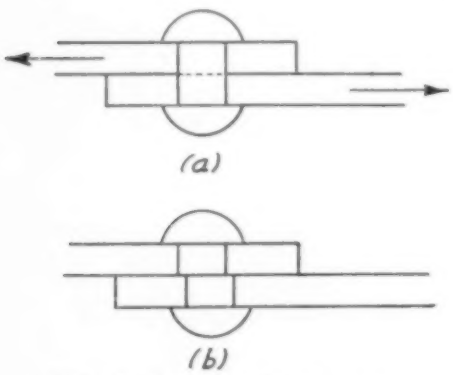


FIG. 43.—RIVET IN SINGLE SHEAR.

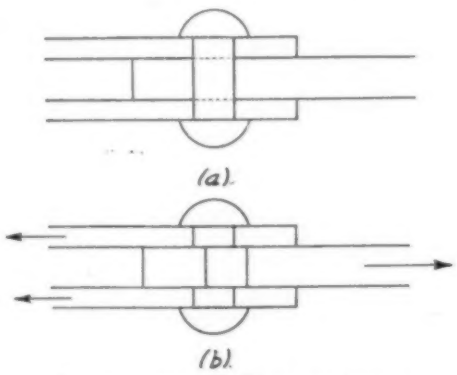


FIG. 44.—RIVET IN DOUBLE SHEAR.

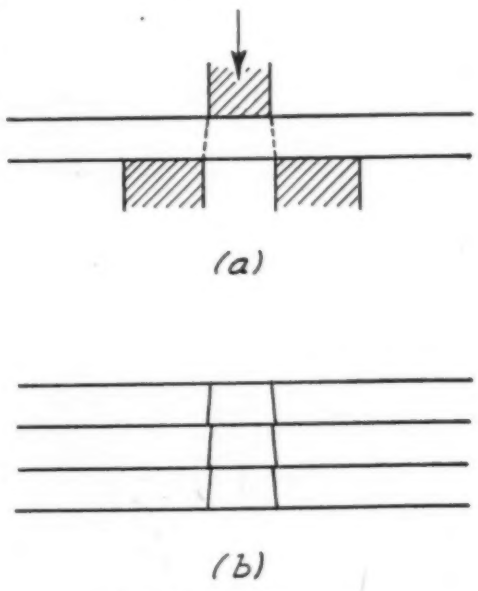


FIG. 45.—PUNCHED HOLES.

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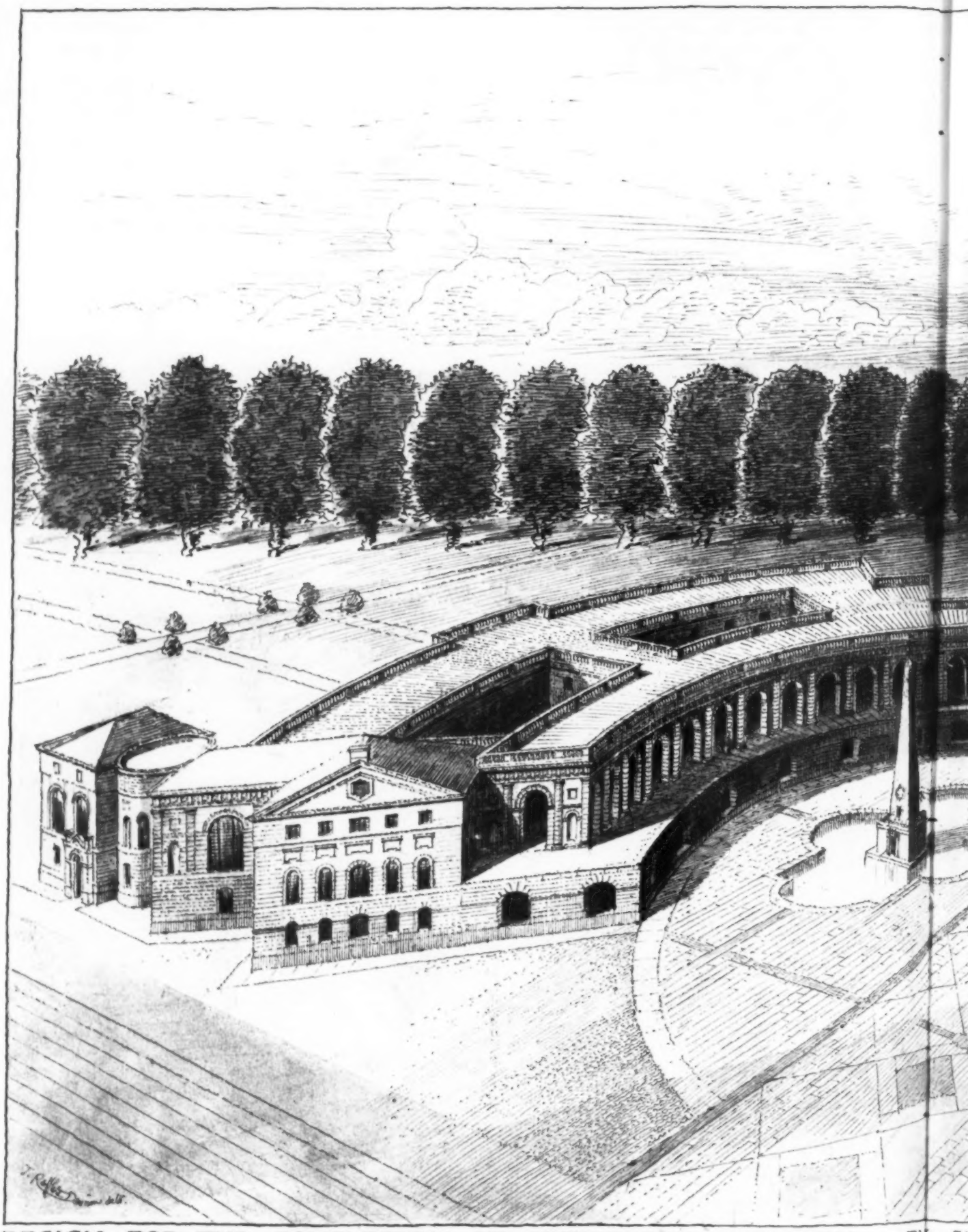
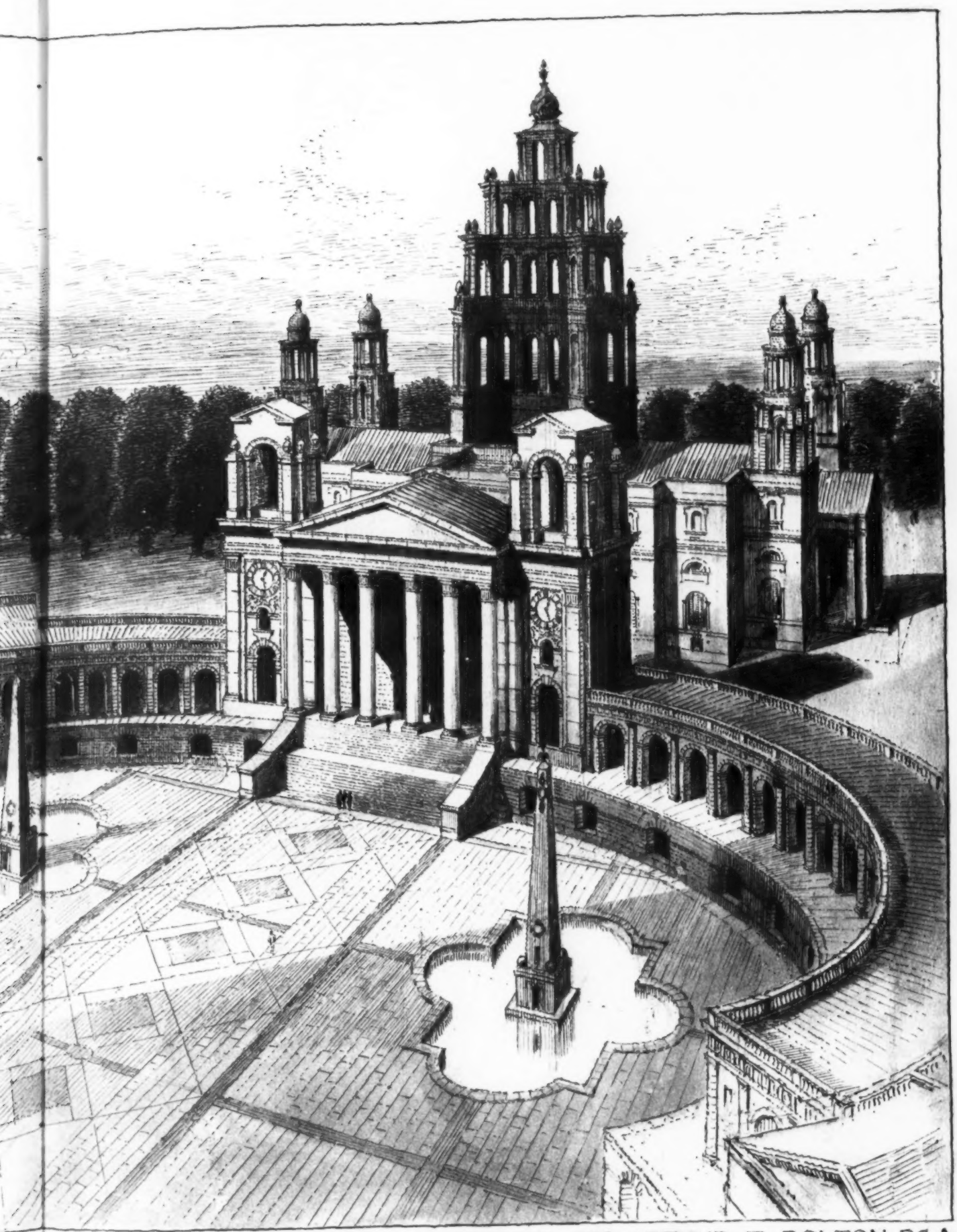
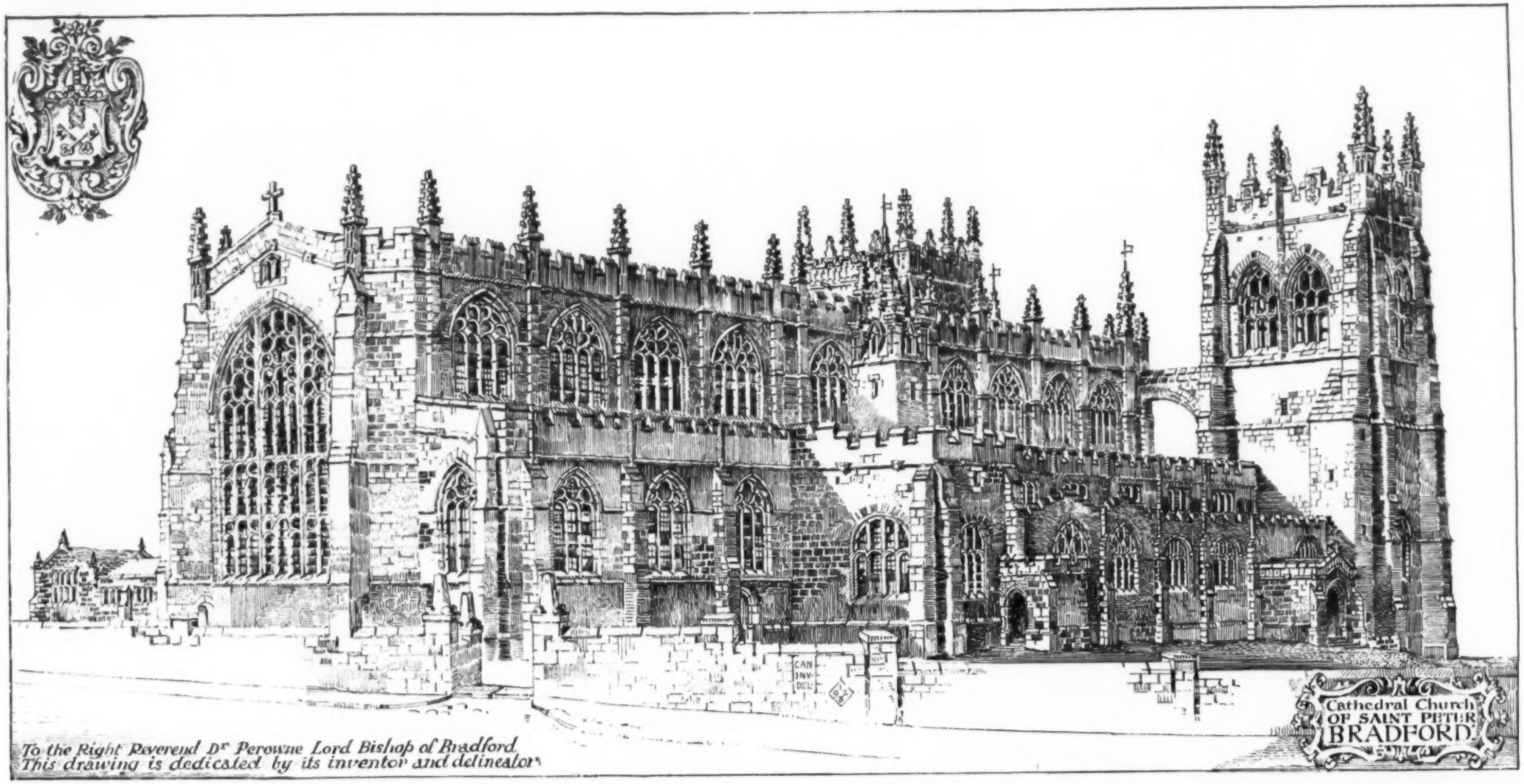


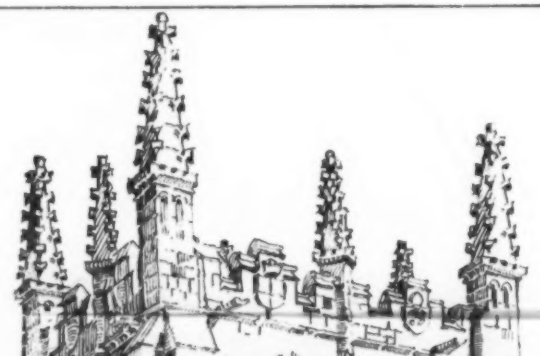
DESIGN FOR THE COMPLETION OF GREENWICH HOSPITAL BY S



BY SIR JOHN VANBRUGH RESTORED BY ARTHUR T BOLTON F.S.A



To the Right Reverend Dr Perowne Lord Bishop of Bradford
This drawing is dedicated by its inventor and delineator



The Porch of the Cathedral church of Saint Peter at BRADFORD
CAN. INV. ET DELT.
1923
To the Venerable W. Stanton Jones Archdeacon of Bradford
This drawing is dedicated by its inventor and delineator.

Sir Charles Nicholson, F.R.I.B.A., Architect.

possible to make a rivet fill such a hole, a rivet of this shape would be much weaker, because it is found that a member in tension is much weakened by sudden variations of sectional area, the curves of stress requiring to flow in gentle stream lines if high loads are to be carried, and any sudden deflection of stress being always accompanied by an intense concentration of stress.

It is also found that the process of punching, which of course produces intense over-straining at the surface of the punched hole, causes intense hardening of the material round this hole, which therefore loses the valuable properties of ductility possessed by the remainder of the section, so that when the specimen is tested in a testing machine the rest of the section begins to yield, but the hard steel surrounding the hole is unable to yield, and therefore tends to carry the whole load until it breaks down with the formation of a crack.

It is found, in fact, that the hardening of the steel round the hole due to the process of punching makes a steel section much weaker, and for this reason, wherever punching holes have been used, it is required in good practice that the material round the punched hole shall be removed by the process of reamering. Old-fashioned practice in assembling the various plates that go to make up one flange of a girder was to prepare a wooden template with the holes drilled, and from this to make the various plates individually, the holes in these plates then being individually made either by punching or drilling, and the plates subsequently assembled on top of each other. It was therefore quite common to find that while there was a general alignment of the holes, considerable variations of an irregular nature might occur, as shown in Fig. 46. This would, in extreme cases, be improved

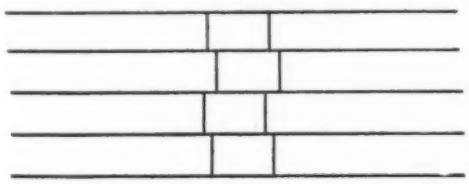


FIG. 46.—NON-ALIGNMENT OF HOLES DUE TO SEPARATE DRILLING OF PLATES.

by reamering, but the result can never be a really satisfactory one.

In high-class modern work, structural members of this kind are drilled through all the plates in a single operation. The usual tool for this purpose is a set or battery of radial drilling machines, enabling a single man to watch and control the drilling of about six holes through the same girder simultaneously. With this process all the plates in the girder are assembled together and clamped, and the drills then pass through all the plates in a single operation. Besides making a very much better job, it is found to be no more expensive in the long run than the other process.

When the structural members are first erected, a temporary connection is made with field bolts, which in good work are subsequently removed a few at a time and replaced with rivets. For some classes of work, bolts are used permanently for the field connections in place of rivets, and it is frequently more convenient to the steel contractor. Bolts are, however, not so strong as rivets of the same size, nor do they give to a job the same strength and rigidity as is obtained with rivets.

As compared with rivets, bolts have the following disadvantages:—

(1) The ordinary black commercial bolt does not fit the hole.

(2) Whereas a rivet is of full section from end to end, a bolt is reduced very considerably in size at the bottom of the thread. Thus a ¾-in. bolt, having an area of .44 sq. in., only has an area of .3 at the bottom of the thread. The disadvantage of bolts as compared with rivets is increased in cases where a load has to be taken by a group of bolts or rivets.

In the case of rivets which accurately fill their holes, the load will generally be shared between all the rivets of a group equally, whereas with bolts which do not fill their holes it will generally be found that some of the bolts make contact and begin to carry the load before others, so producing unequal distribution, and therefore an increased stress on the bolts which carry the load first, which may result in progressive failure. For these reasons bolts are much inferior to rivets for structural work, and the author would consider a 1-in. bolt required to replace a ¾-in. rivet. It must also be remembered that a ¾-in. rivet really becomes 13/16 in. diameter, though no allowance is usually made for this in the calculation of its strength. Obviously no such margin is available in the case of bolts.

While it is desirable that the size of rivets should have regard to the size of the members connected, it is, for practical reasons, of great importance to standardise a job for a single-size rivet as far as possible, as the riveters proceeding from joint to joint would be seriously inconvenienced if they had to carry appliances for many sizes of rivets and pick out rivets of various sizes from the same stove for feeding various joints.

The ¾-in. rivet is the one most generally suited to structural work of ordinary size, and is generally adopted as a standard. It is varied from only in the case of such members where there is some strong reason for varying. In some heavy girders, for example, it may be found that the maximum number of ¾-in. rivets which can be inserted at the proper spacing, consistent with not too greatly weakening the plates, will not give the shear strength necessary. In such cases 1-in. rivets are generally adopted.

It frequently happens that with large gusset plates in the bases of stanchions where very heavy loads have to be transmitted, that the gussets would have to be inordinately long, with ¾-in. rivets, and can be reduced in size when 1-in. rivets are adopted. In both these cases the variation from standard takes place with rivets closed at the works, where the objections to varying the size are not quite so great as on the job.

Bolton War Memorial Site.

The controversy between the Bolton War Memorial Committee and the Streets Committee of the Corporation as to the site of the proposed war memorial was settled at the last meeting of the Streets Committee, when the Victoria-square site was approved. Mr. A. J. Hope, the architect for the memorial, submitted drawings of a modified scheme, and having examined them the Streets Committee recommended that no objection be raised to the proposals

SOCIETIES AND INSTITUTIONS

THE INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS.

Election of Council for 1927.

The following new Council of this body has just been elected:—

R. Beryl, B.A., B.Sc. (London), Chairman of the Publications Committee.
F. E. R. Bicknell (Bradford), Chairman of the Education Committee and Board of Examiners.
W. H. T. Brewer (Messrs. Ford & Brewer) (London), Chairman of the Applications Board.
Vincent Burr (Messrs. Alfred & Vincent Burr), (London).
W. Forbes Campbell (London), First President I.A.A.S.
A. Casse, F.S.I., &c. (Surrey).
L. Redgrave Cripps (Sussex).
A. W. Curtis (Messrs. Robert Angell & Curtis) (London).
W. J. Furbur (Messrs. Thornely & Furbur) (Liverpool).
W. R. H. Gardner (Kent).
R. Stanley Gledhill (Messrs. Gledhill & Wigmore) (London), Chairman of the Finance Board.
O. R. Goodman (London).
R. V. Hall, M.I.M. & Cy.E., &c. (Berkshire).
H. A. Heath (London), Chairman of the Club and Social Committee.
J. H. Hirst, F.R.I.B.A. (Hull).
V. A. Lawson, A.M.I.C.E.
A. Leitch, M.I.M.E., &c. (London).
Andrew Mather, L.R.I.B.A. (London).
V. S. Peel (Birmingham).
J. B. Robinson, M.R.I.A. (Ireland).
F. G. Sainsbury, L.R.I.B.A. (Reading).
C. S. Spackman, R.B.A., Art Adviser to the Association.
R. I. Tasker, M.P., &c.
C. H. Taylor (London), Chairman of the Executive Committee.
E. G. Timbrell, A.C.G.I., &c. (Crewe).
W. T. Bowman, O.B.E., &c. (Middlesex).
W. J. Goode, M.I.M. & Cy.E., &c. (Cumberland).
F. R. Gray, F.I.S.E., &c. (Isle of Wight).
A. O. Marshall, M.I.M. & Cy.E., &c. (Staffordshire).
J. Ellis Middleton, A.M.I.C.E., &c. (Blackpool).
H. F. V. Newsome (Manchester).
W. S. Rumsby (Messrs. Rumsby & Rodd), P.A.S.I. (Bournemouth).
A. E. Starkey, L.R.I.B.A. (Portsmouth).
P. H. Warwick, M.I.M. & Cy.E. (Canterbury).

THE ULSTER SOCIETY OF ARCHITECTS

The twenty-fifth annual general meeting of the Ulster Society of Architects was held recently in the rooms of the society, Scottish Provident Buildings, Belfast, the president, Mr. John Seeds being in the chair. The report and statement of accounts, which showed a record year of progress, were adopted, on the motion of Major James Ferguson, seconded by Mr. D. W. Boyd. In a discussion on the work of the society, in which the president, Major Ferguson, Mr. R. I. Calwell, Mr. C. Love, and Mr. R. H. Gibson took part, the following subjects were reviewed:—Registration of local building by-laws, town planning, and the general question of the spoliation of the countryside.

The election of officers for the year 1927 resulted as follows:—President, Mr. John Seeds; vice-president, Major J. Ferguson; hon. treasurer. Mr. Thomas Eagar; hon. secretary, Mr. R. H. Gibson; council, Messrs. D. W. Boyd, R. I. Calwell, E. R. Kennedy, E. O. Neill, J. P. M'Grath, J. G. Smyth, and D. W. Warne.

Westminster Bank Limited.

The directors of Westminster Bank Limited have declared a final dividend of 10 per cent. in respect of the £20 shares, making 20 per cent. for the year; and a final dividend of 6¼ per cent. on the £1 shares, making the maximum of 12½ per cent. for the year. The dividends will be payable (less Income Tax) on February 1.

THE FOUNDLING HOSPITAL

THE immense accession of values in London sites is already responsible and will be increasingly responsible for the sacrifice of many pleasant amenities of air and space. It has changed Regent-street from a pleasant thoroughfare bordered by structures which had an agreeable height in relation to the width of the street into a street which takes much away from the dignity and charm it once possessed. Historic sites are being used for purely commercial purposes, and in every direction we find it too costly to widen or improve thoroughfares. It is no wonder then that the Foundling Hospital and its beautiful site has attracted greedy attention, and some day, if such alleviative charms as the Foundling Hospital and its site and our beautiful tree-planted squares disappear, London will lose a charm and amenity that nothing can ever compensate us for. It is not surprising, then, to find a Foundling Estate Protection Association at 10, Mecklenburg-square, with Mrs. Cecil Chesterton as hon. secretary, and a distinguished list of presidents and vice-presidents. An admirably produced brochure has just been issued by the Association with graphic photographs of the Hospital and surroundings and an introduction by Professor Lethaby. "When the trees have been cut down and burnt, when the pleasant old buildings have been torn into rubbish and carted away, when the pieties and poetries have been exorcised and the site has been partitioned up and built over to yield what is called profit—what will it profit?" asks the professor. He writes:

"The Foundling Hospital is part and centre of the largest area of considered planning in the whole extent of London. On its destruction will follow the degradation of a district far larger than its own area, which, however, is considerable; and we must ask how far, in a great and ancient city, may these ancient amenities and civilities be sacrificed by some group of persons regardless of the larger and truer interests of the community? It should be clearly seen that the preservation or demolition of such a large historical part of the West Central district is not only a question concerning the Hospital itself, but that the whole neighbourhood of pleasant squares and terraces is quite tragically involved. If, for instance, as has been suggested, a vegetable market were brought here, the neighbourhood might soon decline into slumdom. The Hospital and its grounds form an island of ordered peace that sweetens a wide area, and is as a whole an example of the town planning we hear so much talk of, but see so little with our eyes. Its preservation is important, not only for Bloomsbury, but for London and England."

OBITUARY

HUGH TOWNSHEND MORGAN.

We regret to record the death, in the recent avalanche disaster in the Austrian Tyrol, of Mr. Hugh Townshend Morgan, A.R.I.B.A., of Gray's Inn-square. Mr. Morgan was born in Rome in 1884. He was educated at Bedales School and at the University College, London, where he was awarded the Donaldson Medal for Architecture. He was articled to Sir Reginald Blomfield, R.A., and during his articles attended the Royal Academy School. Later he practised in Westminster, and then in Gower-street, moving after the war to his present offices at 14, Gray's Inn-square. When the war broke out he enlisted in the Artists' Rifles, and later was given a commission in the Machine Gun Corps. He left the army soon after the armistice and resumed his interrupted practice. Though he has devoted most of his attention to domestic buildings, he has been successful in competition for public buildings, including (jointly with Mr. C. Cowles-Voysey, A.R.I.B.A.) the White Rock Music Pavilion at Hastings, and (jointly with Mr. Alan Brace) Endcliffe Park Church, Sheffield. Mr. Morgan was married during the war to the daughter of Sir Nestor Tirard, Emeritus Professor of Medicine at King's College, and has one daughter, aged 7.

LEONARD A. SHUFFREY.

We deeply regret to announce the death of Mr. Leonard A. Shuffrey, the well-known decorative artist and founder, with George Sherrin, of the business of Messrs. Shuffrey & Co., in Welbeck-street. Mr. Shuffrey was one of the earliest members of the Architectural Association, joining in 1871, and having among his fellow students Sir Aston Webb. He went into partnership with Sherrin in 1880, the firm specialising in the design and manufacture of objects required in interior decoration—wall papers, fire grates, chimney-pieces, plaster ceilings, tiles, &c., to be carried out under the patronage of architects. Mr. Shuffrey became a member of the Incorporated Institute of British Decorators in 1899, the year of its institution, under the presidency of J. D. Crace; and he was in turn a member of the council, vice-president, treasurer, and president. He read papers on "The Use of Relief Ornament," "The Position of the Decorator and His Craft," "The Treatment of Woodwork in Decoration," and "Chateaux of the Loire Valley." He also designed the Crace illuminated address. One of his most notable literary works was "The English Fireplace and its Accessories"—a book which is to be found in the library of most architects. Mr. Shuffrey designed and executed the plaster ceiling in the entrance of the dining-hall of the Painters' Company, and other works are war memorials for Witney Grammar School, Bloxham School, Oxon, and Walpole Park, Ealing. As recently as 1925 he was awarded the Gold Medal of the Incorporated Institute of British Decorators, of which only three had been previously awarded—to Sir William Richmond, R.A.; J. D. Crace; and Metford Warner. Mr. Shuffrey was an artist of real distinction, and to his artistic qualities was allied a most engaging personality. His death is the breaking of a link with a most interesting period of architectural development and is a real loss to architecture.

AMBROSE McEVOY.

We regret to announce the death of Mr. Ambrose McEvoy, A.R.A., at the age of 48. Born in 1878, he leaves a great legacy of portraiture, chiefly of beautiful women and famous men, scattered throughout the public galleries and private collections of the English-speaking world. He married in 1902 Mary Spencer, daughter of Colonel Spencer Edwards, of Freshford, Bath, and she survives him with a son and a daughter.

GEORGE CHARLES VERNON INKPEN.

The death has occurred at Southsea of Mr. George Charles Vernon Inkpen, architect, aged 70. Two months ago he was selected chairman of the South Wilts and Dorset section of the Surveyors' Institution.

The Late Mr. Walter Brierley.

Mr. Walter Henry Brierley, F.S.A., F.R.I.B.A., of Bishopbarns, St. George's-place, York, who died at Hove on August 22, 1926, aged 64, left estate of the gross value of £72,288, with net personalty £63,964.

The Foundling Hospital: Garden Pavilion.

TOWN PLANNING OF GREATER LONDON

LAST week-end local authorities in the Greater London area received a letter from the Ministry of Health asking them to pass a resolution at an early date agreeing that it is advisable to appoint a committee to consider and make suggestions for the future planning of the area within a radius of 25 miles from Charing Cross. This includes something like 2,000 square miles. There were invited to a recent conference the representatives of some 154 local bodies, and virtually the whole of the invitations were accepted. In the letter now addressed to authorities it is stated that the Minister of Health is "convinced that the formation of a committee of this kind is urgently required if the problems connected with the development of London and the surrounding area are to be adequately considered. Without a comprehensive consideration of these problems by a body representative of the local authorities, he believes that it will be virtually impossible to avoid difficulties which, sooner or later, must involve the expenditure of large sums of money.

"It will be observed that the committee will be of an advisory character, and that it is proposed to limit its expenditure to the produce of a rate of 1-20th of a penny in the pound; this rate will be levied only by the town-planning authorities, so that there will not be two rates in the same district for the same purpose. The work of the committee will be to investigate the general problem and to formulate proposals for the consideration of the constituent authorities. The committee will not supersede the regional committees, but will help to co-ordinate their labours. After resolutions have been passed by the constituent authorities, the Minister will address a further communication to you as to the steps to be taken to appoint the representatives on the committee."

HOUSING SUBSIDIES

WE quote here some extracts from Mr. Geoffrey Hutchinson's recent letter to the *Times* on the question of "Housing Subsidies." The letter runs:—"The speeches of Lord Henry Cavendish Bentinck and other supporters of the Government in the debate in the House of Commons on December 2 [reported in *The Builder* for December 10] on the proposal to reduce the existing rates of housing subsidies indicate that taxpayers and ratepayers are willing to undertake the expense of the present housing programme provided that they are satisfied that an increased supply of suitable houses for the class of persons who need them most is thereby assured. But the facts seem to show that increases in the rates of the subsidy are at once absorbed in building costs, and have only a disproportionate effect upon the rate of production. The following table shows how the cost of building has progressively advanced with the increase in the subsidy:—

—	Rate of Subsidy.	Average cost of assisted non-parlour house.
Dec., 1922	Nil	£345
Dec., 1923	£6 per house for 20 years	£413
Dec., 1924	Ditto, or £9 or £12 10s. for 40 years, for houses subject to special conditions	£440
Dec., 1925	Ditto	£448

"After making due allowance for other factors, the inference seems to be strong that larger subsidies have been responsible for higher costs. The policy of fixing the subsidy rate over a comparatively long period of time results in permanently increasing costs without correspondingly stimulating supply. One is tempted to inquire whether the problem cannot be approached from the opposite directions. No attempt has apparently been made to regulate the price of the completed house. The cost of building in previous years might form some sort of basis. Fresh legislation would be unnecessary to enable the Ministry of Health to refuse approval of proposals for houses at a price above, say, the average cost of building in the district in the previous year, or whatever other figure might be determined upon. Such action by creating a demand for an article at a price fixed within certain limits might be effective in producing the supply. If it were known that local authorities would not entertain tenders above a certain figure, is it too much to expect that contractors would not in a short time be forthcoming willing to tender within that limit?"

COVENT GARDEN MARKET

A MEETING of Covent Garden traders and merchants, organised by the Covent Garden Tenants' Association, was held recently at the Connaught Rooms, Great Queen-street, to protest against the proposed removal of the market to the Foundling Hospital site. Resolutions were unanimously passed expressing the opinion that there was no necessity for the removal of the market, and urging that, in the public interests, the market should be controlled by a public authority.

The Chairman, Major Monro, outlined the progress of events since the last meeting of the Association, and referred to the evidence given before the Royal Commission on Cross River Traffic. He said that the statistics given before the Commission with regard to traffic had been exaggerated and that they had been able to submit evidence to the contrary. It was a triumph that they had been able to alter the opinion formed on insufficient knowledge in the minds of the Commissioners to the extent that there was no mention in their report of Covent Garden, and the alleged congestion created by it, with regard to bridges' traffic. He urged that what ought to be done was to improve Covent Garden Market as far as possible, and not run the risk of wrecking it by moving it to another site. Following the meeting in the Connaught Rooms, the Committee of the London and Provincial Fruit Buyers' Association passed the following resolution in regard to the proposed removal of Covent Garden Market:—

"That this meeting of the London and Provincial Fruit Buyers' Association, representing as it does the majority of wholesale buyers attending Covent Garden Market from the main provincial centres, endorses the resolutions passed to-day by the general meeting of Covent Garden traders, merchants, &c., and maintains that a vast amount of such trade would be lost to Covent Garden Market by such a removal as that proposed."

A REGENT'S PARK AVENUE

CONSIDERABLE attention, says the *Times*, is being given to the proposal of the Commissioners of Crown Lands to let a timbered site near Regent's Park for the erection of a block of flats. This is the site and grounds of Abbey Lodge in Park-road, part of which forms one side of the avenue known as Hanover-gate, leading from the Outer Circle to Park-road.

There is no danger that this lime-bordered avenue itself will be destroyed. Its trees and oak fences are to remain, according to the present intention of the Commissioners of Crown Lands. Nor is there any immediate possibility of damage on the other side of the avenue, where the property is held by Lady Ribblesdale on a lease that will not expire for another thirty-seven years. The actual trees, fences and shrub hedges of this lovely entrance to the park are all secure from damage or destruction by the conditions the Commissioners have imposed. This body has even gone further in its attempt to disarm criticism by providing that the block of flats must be set back 30 ft. from the line of trees that flanks the avenue on the Abbey Lodge side.

The grievance of those who are anxious to prevent any disfigurement of this avenue and its open sides consists not so much in an objection to building on the site or to making it more profitable to the Treasury than it has been in the past, but in dislike of the sort of development which is proposed. The main line of the flats, if the present plans are adhered to, will run parallel with Park-road and a shorter arm of the building will go parallel with Hanover-gate towards the park. It is intended that this should be an erection of red bricks with facings of Portland stone rising to a height of 70 ft. That would make the building at least 20 ft. higher than any others which can be seen from, or adjoin, the site, and worse still, it would raise it quite to the level of the highest tree on this land and above the tops of some. Opponents of the scheme, while admitting all that can be said of the lucrative nature of the scheme, argue that a reasonable increase in the value of the site could have been reached without deciding to allow flats to be put on it. It is quite clear, however, that no alternative scheme could bring anything like the return that will come from a huge block of flats.

Since financial considerations have led the Commissioners to accept flats, there is every reason why they should not allow these to overlook everything else in the vicinity. To reduce the height of the proposed building by 20 ft. would not meet all the criticisms that are being brought against the scheme, but at least it would make the innovation less objectionable and would restore a fringe of tree-tops on the skyline to the residents who will otherwise be built in.

GLASTONBURY MOTOR PARK

The Council for the Preservation of Rural England have sent the following letter, signed by Lord Crawford, President of the Council, and Professor Patrick Abercrombie, the hon. secretary, to the Archbishop of Canterbury in regard to the suggested motor park at Glastonbury Abbey:—

"The Council for the Preservation of Rural England desires to associate itself with the petition which is to be presented to your Grace, praying you to use your influence to prevent the trustees for the Glastonbury Abbey site from parting with a portion of the ground in front of the Abbot's Kitchen for a motor park. This portion of the site was purchased as recently as five years ago with money specially subscribed by the public and vested in the Diocesan Trustees, in the belief that this historic, beautiful, and sacred spot was in safe guardianship. We are satisfied that the proposed motor park, while not actually damaging any archæological remains, will destroy the quiet and seemliness of the scene. We have also satisfied ourselves by a careful survey of the town that several other sites for a motor park are available which are superior from the town-planning point of view and which, while meeting traffic requirements, will not damage the amenities of the site of Glastonbury Abbey. The matter is urgent; the trustees are already in treaty with the Town Council and we are convinced that a word from your Grace would effectually hold up this unfortunate transaction."

The Council have also sent a letter to the town clerk of Glastonbury, stating that they are convinced that the proposal will do irreparable damage to the beauty of Glastonbury and its most precious possession.

We learn, however, that, with one dissentient, the Glastonbury Town Council resolved at a meeting on Tuesday that a motor park was essential at New Abbotts. In coming to their decision, the Council resolved that the spot was the most advantageous that could be offered to the enormous number of visitors received by the historic town. There might be possible alternatives in lands owned by the Abbey trustees, and they were prepared to consider any that the trustees might offer.

William Willett Memorial Fund.

A little over £3,000 is now required to complete the purchase of 87 acres of Petts Wood, Chislehurst, as a memorial to the late Mr. William Willett, who introduced the principle of "Daylight Saving." Lord Rothermere has sent a contribution of £23 to the Willett Memorial Fund.

ARCHITECTS' & BUILDERS' INQUIRY BUREAU

We are glad to give questions and answers, but cannot accept responsibility for contributed replies, especially on legal matters.

May we appeal to our correspondents to submit their queries on paper of a size easily filed, and written as legibly as possible, or, better still, in typewriting?—ED.

Copying Shop-fitting Designs.

[REPLY TO "SHOPS," DECEMBER 24.]

SIR,—The copyright of architectural design is one of the hardest to establish or protect, and provided none of the clearly protected "gadgets" of the firm concerned are not imitated, I should imagine that "Shops" is on moderately safe ground, though it is hardly possible to say so definitely without knowing the full facts of the case. I should, however, advise him most strongly to preserve his peace of mind by using his ingenuity towards adding his own personal contribution to the design; and there are, indeed, few things so perfect that they cannot be improved. Possibly your correspondent feels himself barren of ideas upon the subject, in which case he will do well to employ a competent architect.

It is for such cases as these, among other things, that architects exist, for the service of the public. ONE OF THEM.

Lathing Deductions.

SIR,—Can any reader inform me if it is the practice in Scotland or elsewhere, and since when, in measuring new work for lathing to make deductions for all brick partitions bearing joists, that is, 4½ in. by length of each partition? At present I measure ceilings by plan of building, and include partitions mentioned.

LATH.

Lino on Floor Boards.

SIR,—I have just had a bungalow erected with the floor boards laid flush on the foundations. Will laying lino down have any bad effects, and if the lino is already laid will the effects be so bad as to make its removal advisable?

A. C. EDWARDS.

Carting Water.

SIR,—I have a building contract for fifteen houses, and there is no clause in the specification stating that the builder shall find water necessary for building. A separate contract was let to another firm to sink well and erect storage tank to supply the houses, but this work has been held up, which has necessitated carting water for building use. Am I justified in charging extra for this carting?

CONTRACTOR.

Composition Building Materials.

[REPLY TO THE GUATEMALA PLANTATIONS, LTD., DECEMBER 31.]

SIR,—I have no doubt that a number of firms offering asbestos products will answer this inquiry, and I have little doubt that such a material as this is most likely to stand the climatic conditions and answer to the requirement of rapid construction. I should, however, like to warn your correspondent to deal with the best class of firm, and to insist on a guarantee of maturity, as there are many asbestos sheets on the market which are little more than rubbish, and if paint is to be applied, even the best quality asbestos needs eighteen months or two years before it is sufficiently inert to take a permanent painted surface.

AFTER THE EVENT.

Chemical Compound for Treating Stone.

[REPLY TO J. M., DECEMBER 31.]

SIR,—Your correspondent should get in touch with any of the well-known firms supplying waterproofing compounds, who will no doubt be able to quote for the brand suitable for treating stone. Their addresses may be found in the advertising columns of *The Builder*. For protecting ordinary stone, however, the use of limewash is frequently recommended by the authorities of to-day.

PROTECTION.

Profit-Sharing Schemes.

SIR,—If any of your numerous contractor readers have adopted a profit-sharing scheme operating amongst their employees, I, for one, should be very interested to have the various details explained.

The scheme in mind should embrace:—Joinery shop manager; works superintendent (outside); clerks; foremen (say, a dozen), and old servants (according to length of service). Floating labour, no doubt, could not be dealt with. The turnover involved would range from £80,000 to £100,000 per annum.

The views of your readers as to what is considered an "adequate office staff" in view of turnover mentioned—taking into consideration work involved in estimating up to, say, £300,000 per year—would also be interesting. PROFIT SHARER.

Damp Walls.

A correspondent's reply to "Interested" (December 24) on this subject has been posted direct.

BOOK REVIEWS

The Workmen's Compensation Act, 1925: with Notes, Rules, Orders and Regulations. By W. ADDINGTON WILLIS, C.B.E., LL.B., of the Inner Temple and North-Eastern Circuit; Barrister-at-Law; Deputy Umpire under the Unemployment Insurance Acts. Being the Twenty-fourth Edition of "Willis's Workmen's Compensation Acts." (London: Butterworth & Co.) 1926. 15s. net.

Special importance attaches to this twenty-fourth edition of Mr. Willis's well-known treatise on Workmen's Compensation, as the passing of the consolidating Act of 1925, which came into force on May 1 last, has necessitated his revising and recasting the work. As we explained in our articles on Workmen's Compensation, the new Act is better arranged than its predecessors, and Mr. Willis endorses the opinion we expressed, but the difficulty practitioners will find themselves confronted with is to recognise the old sections as re-grouped and re-numbered. Mr. Willis, as we did in our fourth article, has arranged a comparative table of the provisions of the new Act and the repealed Acts, but it does not proceed quite on the same principle. We made the provisions of the new Act the leading feature and referred back to the repealed provisions; but Mr. Willis takes the old principal Act of 1906 as the key, and with reference to that refers to the new sections. This Comparative Table seems very well compiled and is a valuable guide to the new Act. But in addition to this Mr. Willis, who in the text makes the new Act, taking the sections in numerical order, the basis of his work, after each section or group of sections, refers to the corresponding sections of the repealed Acts, and further, in the Index, has inserted references to the sections of the new Act. With the introduction of a consolidating statute this question of references is of the first importance, and the author appears to have done his utmost to make the path of his readers clear. The task of the text-book writer is by no means simplified by the consolidation of the law, nor can his text be abridged—for two reasons: In the first place, as the new Act does not apply to any case where the accident happened before January 1, 1924, the old statutes are still material; and in the second place, as the sections are merely reproduced unaltered, the old case law still applies, so the old features have to be retained but incorporated with the new enumeration and arrangement of the consolidating Act. This task Mr. Willis appears to have carried out with his usual thoroughness, and those who have been awaiting a guide to the consolidating statute will give an unusually warm welcome to what has become an annual edition of this well-known text-book.

If we may do so, with all respect for an author of such experience, may we express regret that a point we drew attention to in our recent articles does not seem quite clearly stated, and that is that the defence of serious and wilful misconduct can only arise where the misconduct has occurred within the sphere of the workman's employment. We emphasised this point in our first article because we found that some general misapprehension of this point still existed and a definite statement on the point seemed required. We are also sorry that Mr. Willis has passed over without comment the difficult section 41 relating to the payment of poor relief, as his opinion on the points raised by this section, which first appeared in the Act of 1923, would have been extremely valuable. In conclusion we may state that the case law has been brought up to date down to March 31 last, and that the Rules, dated April 28, are included in this edition of a work which has established its own reputation and requires no recommendation at the hands of any reviewer.

The Law of Wills for Testators; or, How to Make a Will. By G. F. EMERY, LL.M., of the Inner Temple and South-Eastern Circuit; Barrister-at-Law; Official to the Archdeacon of Ely; late Scholar Trinity College, Cambridge; Author of "Handy Guide to Patent Law and Practice," &c. (London: Effingham Wilson.) 1926. 2s. net.

This appears to be a second edition of this little handbook, and the reason for its appearance is stated in the preface to be that the Administration of Estates Act, 1925, and various allied Acts make a new edition necessary. The author there observes that the law as to the devolution of property on an intestacy has been put into the melting pot and the administration of an intestate or partly intestate estate has been made considerably more complex, and any married person, whose property apart from personal chattels is worth more than £1,000, should consider whether the Will imposed on an intestate estate by the Act meets with his or her approval, and unless they are completely satisfied they should make a Will without delay. We do not know that we need do more than give the above quotation from the preface. When the author speaks of "The Will imposed on an intestate estate" we presume he refers to the statutory provisions as to the distribution of the residue of an intestate estate which will be found more particularly in Chapters II and III.

This little volume in about 100 pages appears to give some useful information as to Wills in the altered condition of the law, but we quote with approval the author's observations on page 51, which appear to us to make the object of his work plain and safe: "It is, however, only in very simple cases . . . that a wise man will trust to his own ability to make a Will. Some people are apt to forget that a Will is a legal document dealing with property and furthermore dealing with property *in futuro*. Although such persons would not dream of preparing a conveyance of property *inter vivos*, they yet consider themselves quite competent to undertake the more difficult task of preparing a Will to convey property after they have departed." These are true words of wisdom, for even more than one President of the Probate Division has failed to draw a Will that did not need an application to the Court before it could be administered.

Read with the author's own limitation that it is unwise to make a Will without legal advice this little handbook should serve a useful purpose in making the layman see how he stands under the law as altered, whether a fresh Will is desirable, and then, if in the least doubt, to hurry off to his legal adviser as soon as possible,

Books Received.

ARTIFEX; OR, THE FUTURE OF CRAFTSMANSHIP. By John Gloag. (London: Kegan Paul, Trench, Trubner & Co., Ltd.) Price 2s. 6d. net.

EXECUTORS AND ADMINISTRATORS: HOW TO PROVE A WILL. By G. F. Emery. (London: Effingham Wilson.) Price 3s. net.

THE BUILDING TRADE

BY-LAWS RELATING TO BUILDINGS AND STREETS—I

INTRODUCTORY.

THAT there have been constant complaints in connection with the by-law system cannot be denied, and that these complaints are of long standing can be attested by reference to the Report of the Departmental Committee on Building By-laws, which was issued in 1918, where it is stated: "For some years past there has been in Parliament and in circles interested in building (especially in the housing of the working classes) an agitation which has periodically found an echo in the lay and technical Press with reference to restrictions imposed, or said to be imposed, by by-laws." The Committee did not deny that there were some grievances, but they found that many of the complaints were based upon misapprehension as to the various methods of control, which caused many persons to attribute all restrictions imposed upon building and development to the operation of by-laws. The Report gave one or two instances of this, as, for example, that common drains are prohibited by by-law, whereas where local authorities have prohibited such drains, or sought to prevent their use, it has been by regulation, but never by by-law. Also, the Committee found that some 70 per cent. of the complaints made before them arose out of another question which has no connection with by-laws—the conditions imposed by local authorities when taking over private streets. Other complaints arose out of a misapprehension as to the different forms of control which, besides by-laws, include public Statutes, local Acts, and regulations, as well as discretionary powers.

The Report of this Committee has not received the attention it deserved owing to the many pressing matters occupying public attention since the termination of the war, and in the following articles we propose examining the findings and recommendations of the Committee in some detail, but before proceeding to discuss the Report we desire to make one or two observations of a preliminary nature.

In the first place, if grievances exist, the present would be a favourable opportunity to bring them forward and prove them, as it is rumoured that the Public Health Acts are to be consolidated in the near future. We shall deal with this question of consolidation in subsequent articles. Secondly, as regards the housing of the working classes, much has been done since the Committee issued its Report to remove grievances, but this has somewhat complicated the general law with which we are dealing; for, as we shall show, one or two sections of great importance in connection with buildings generally, have been inserted in Housing Acts carrying out some of the recommendations of the Committee, which sections may well be overlooked, for those persons concerned with building by-laws generally look to the Public Health Acts for information. Thirdly, we were very anxious in this first article to give instances of actual grievances arising out of the variations which occur in by-laws in different districts and to ascertain whether any general principle could be derived as to the causes which led to variations from the model codes being inserted, but we have found this an impossible task. The Committee itself found it difficult to run to earth grievances directly traceable to by-laws, the grievances proved being generally due not to the system but rather to neglect of, or misuse of, the machinery provided.

Possibly the publication of this series of articles, however imperfect they may be, will serve a useful purpose by evoking correspondence on the subject, and we shall welcome any examples of cases of real hardship which our readers can send us. Of course, many complaints may be traced to the retention of obsolete by-laws or to the application of by-laws unsuitable to the district. A good example of the evils attending the retention of obsolete by-laws was furnished by the celebrated case, known as the Repton School case, which we shall refer to in detail in a subsequent article. The by-law in question had been a perfectly reasonable by-law when it was passed and approved, relating to open spaces at the rear of domestic buildings, but in 1907 a statutory change had been made in the definition of what was to be deemed a "new building," bringing in any addition in front of an existing building. The model forms were at once altered to meet this new definition in the statute, but the retention of this by-law by the local authority made it impossible to make any addition in front of an existing building, even such as a bay window, and the Court held it invalid.

In the past the hands of the Local Government Board, and its successor the Ministry of Health, have been much tied, having no power (except under the Housing Act, 1909), to interpret by-laws, enforce them, entertain appeals from their requirements, or insist on their repeal, and an instance is given in the Report of the Committee showing the bearing this has had on both the retention of obsolete by-laws and the application of by-laws unsuited to a district. A local authority in 1906 presented by-laws for approval which in the opinion of the Local Government Board were too exacting for the character of the district, containing more stringent provisions even than the model then in force. The district adjoined and surrounded on two sides a large and growing town, and the by-laws actually in force dated from 1864 and were open to the gravest criticism. Had the Board refused to approve the by-laws presented in 1906 the district would have remained only subject to the by-laws passed in 1864, and had the local authority been pressed too far to moderate the proposed by-laws they might have abandoned their proposals; therefore, with some amendment of the most stringent provisions, the Board felt constrained to approve the by-laws. The Report states that this was by no means an isolated case.

We shall show in succeeding articles that this cause of grievance, owing to the recommendations of the Committee, has already been removed, for by section 13 of the Housing Act, 1923 (section 101 in the consolidating Act of 1925), the Minister of Health is empowered, where he is satisfied by local inquiry or otherwise that the erection of any building is impeded unreasonably by by-laws as to buildings or new streets, to require the local authority to revoke the by-laws or to make such new by-laws as he may consider necessary to remove the impediment, and in case of non-compliance on the part of the local authority the Minister may himself revoke such by-laws or make new by-laws to remove the impediment. This is an extension of section 44 of the Housing Act, 1909, to any buildings in any borough, or the district of any urban or rural council.

This strengthening of the hands of the Ministry will tend to remove some of the grievances hitherto experienced, and a recent circular issued by the Ministry called the attention of local authorities once again to the powers conferred by the above section and pointed out that although the Minister had been reluctant to use this power if he could avoid doing so, now that more than two years had elapsed since Parliament had made this power available, the national interests involved suggest that the power should be used where by-laws are of a definitely restrictive character. This, of course, means definitely restrictive as creating unreasonable impediments to building, and the power can only be used where such an impediment can *bona fide* be found to exist.

We have some authority for saying that if another suggestion of the Committee were adopted, viz., that all by-laws should be made subject to a time-limit, after which they would automatically terminate, this would work with less friction and cause less complaint on the part of local authorities, and it is obvious that it would be more generally effective in bringing by-laws into line. We shall refer to this in detail in subsequent articles.

The figures published in the Annual Report of the Ministry last August show that progress has been greatly accelerated in the last three years in substituting by-laws of model types for those out of date; the Ministry keep the model forms well up to date and reprint them at very short intervals expressly to make the latest results of the experience of various local authorities available for those drafting new by-laws, so there is less excuse for unreasonable variations than used to be the case, and it is satisfactory to note that since the beginning of 1923 up to the commencement of 1926 some 700 authorities have undertaken a revision of their by-laws, and, as we shall show later on, when new by-laws are presented for approval, the Minister, in accordance with a recommendation of the Committee, is not so apt to allow local variations as was the case in the past.

It was admitted before the Committee that many local authorities in the past have shown a preference for introducing innovations of their own into the model codes, and, as it was put, "to dot the i's and cross the t's," but the process often went beyond this, and in one case which has been brought to our notice it took the form of requiring by by-law fastenings to be fitted to the doors of water closets, earth closets, and privies, a necessary provision but hardly one to be introduced in by-laws subject to penalties.

As we have said, we have found it difficult to furnish and classify complaints as to the operation of by-laws, but a correspondent has kindly furnished us with some examples of what he considers unreasonable conditions in force in certain districts, and amongst these he cites a by-law which provides that in an attic intended to be used as a sleeping apartment the room shall not be less in any part than 5 ft. in height. Our correspondent contends that this obstructs the construction of real cottages, for if the roof starts at 3 in. from the floor a considerable portion of the floor space inside has to be cut off, with a 45 degrees pitch of roof, thus reducing the floor space of the attic very considerably, whilst, if the only other alternative is adopted of starting the roof pitch at 5 ft. it gives an excessive proportion of wall to roof outside. The uniform height specified in this by-law appears unfortunate, but one of the points the Committee on Building By-laws drew attention to, as a legislative gap, was that the Statutes conferred a power to regulate the height of rooms by by-laws, but not their cubical content or area, and this point appears to deserve attention. The Committee also pointed out that although by-laws can be made for securing ventilation they cannot require lighting, and powers have been obtained to secure this by local Act when local authorities desired to deal with it.

Some of the complaints made against by-laws brought to our notice are based upon the

ground that they are too rigid, whilst others complain that sometimes an element of discretion is allowed which makes it difficult to ascertain what will be satisfactory compliance. Amongst these latter complaints there is some weight, and in the following articles we shall deal with this subject of discretion, but we may note here that the Committee made some important observations on the kind of by-law, the subject of complaint to us, which allows an operation to be done " in a manner satisfactory to the local authority " as compared with a by-law which permits it to be done " in a satisfactory manner." The distinction between the two is obvious. In the first case no man can say what will be deemed satisfactory to the local authority, but in the second the question of what is a " satisfactory manner " can be determined by the Courts as a last resort, and can be ascertained beforehand by expert opinion, and the Committee approved the latter kind of clause but disapproved the former. As we shall show, the Committee suggested a special tribunal to deal with the interpretation of by-laws in advance, and if such a tribunal was established such questions as the above, *i.e.*, what is " a satisfactory manner," could, it was suggested, be referred by agreement of the parties to that tribunal.

In the following articles we shall deal first with by-laws relating to buildings, and subsequently with the question of streets. The Committee found the questions relating to the control of streets of far greater difficulty than the control of buildings, but in connection with streets, by-laws only play an important part in the early stages of laying out new streets.

Building Science Lecture.

The opening lecture on building science under the Trust inaugurated by Mr. Alfred C. Bossom, is to be given early in February by Professor C. H. Reilly, of Liverpool University, at the Royal Society of Arts, with Sir Frank Baines in the chair.

NEW BUILDINGS IN LONDON

Baker-street.—SHOPS.—Messrs. H. Neal, Ltd., of Oaklands Gate, Northwood, are erecting shops at 1–5, Baker-street, W.1, for Mr. Voyce, D.S.O. The architect for the scheme is Mr. S. Gordon Jeeves, of 16, Hanover-square, W.1.

Baker-street. — CONVERSION. — The Pitcher Construction Co., Ltd., are converting 108–114, Baker-street, into shops and premises for the Metropolitan Surplus Co. The plans have been prepared by the owners' architect.

Bolsover-street.—EXTENSION.—Messrs. Holloway Bros., of Bridge Wharf, Grosvenor-road, S.W.1, are the builders for the new extensions now being erected in Bolsover-street, W.1, for the Royal National Orthopædic Hospital. Messrs. Rosser & Russell are carrying out the heating arrangements and the flooring work is being done by the Kleine Patent Flooring Co. The electric lighting, &c., is by Messrs. Duncan Watson & Co. Mr. R. M. Piggott, F.R.I.B.A., 44, Bedford-row, W.C.1, is the architect.

Cornwall-road.—BUILDING.—A tender is about to be accepted by the Metropolitan Police, New Scotland-yard, S.W.1, for the erection of police married quarters in Cornwall-road, Lambeth. Mr. G. Mackenzie Trench, F.R.I.B.A., is the architect, and Messrs. Thurgood, Son & Chidgey, 18, Adam-street, W.C.2, have supplied the quantities.

Duke-street.—EXTENSION.—For extensions to their premises Messrs. Penberthy & Co. have acquired premises in Duke-street, Oxford-street, W.1. No architect or builder has been appointed in connection with the scheme.

Clapham.— IMPROVEMENTS. — New cleaning sheds are proposed for Clapham Station by the Southern Railway Company in their programme for 1927.

Dollis Hill.—HOUSES.—Messrs. Richard Costain & Sons, Ltd., have submitted a preliminary plan of 1,394 houses proposed to be erected at Dollis Hill, on the south side of the North Circular-road between Neasden and the Edgware-road, to the Willesden U.D.C. for approval.

Euston-road.—PREMISES.—Messrs. Greenham Ltd., have just carried out the demolition work at 367, Euston-road, W.1, for the erection of new premises for Messrs. G. Maile & Son, Ltd. Messrs. J. Smith & Sons (Norwood), Ltd., of South Norwood, are the builders, and Mr. E. A. Watson is the architect.

Highgate.—ESCALATORS.—Work in connection with the establishment of comb-type escalators to supersede the four lifts at Highgate Underground Station will begin shortly. When the escalators are installed, the lifts will be dismantled, and the space they occupy devoted to the formation of a larger booking hall.

Portland-place.—PREMISES.—Messrs. C. H. Abrahams is carrying out the demolition work at 73, Portland-place, W.1, where new premises are to be erected. Messrs. Wills & Kaula, 3, Southampton-street, W.C.1, are the architects.

Richmond.—BANK.—Messrs. E. A. Roome & Co. have secured the contract for the building of a new branch for Lloyds Bank, Ltd., in High-street, Richmond. Messrs. Young & Co., of 6, Queen Anne's Gate, Westminster, are supplying the constructional steelwork and concrete reinforcement. Mr. Horace Field, F.R.I.B.A., 5, Gower-street, W.C.1, is the architect.

Sloane-square.—RECONSTRUCTION.—A new escalator at Sloane-square District Railway station is to be an ascending one from the west-bound platform to the street level, with an intermediate landing for east-bound passengers, and its construction forms part of a general scheme of reconstruction at this station. The other improvements include the complete rebuilding of the booking-hall and entrance to the station, and the installation of two booking booths. The District Railway's own architects have prepared the plans. No contracts have yet been placed.

St. Thomas's-street. — ENLARGEMENT. — Sir Gilbert Wills has notified the treasurer of Guy's Hospital that he has increased his donation to the Hospital's Bicentenary Fund from £5,000 to £50,000. This gift is for the purpose of enlarging and reconstructing the out-patients' and casualty department. No definite building plan has yet been decided upon.

Twickenham.—HOUSES.—Approval has been given by the Town Planning Committee of the Twickenham Borough Council to the lay-out, prepared by Sir Banister Fletcher, V-P.R.I.B.A., for the development of the estate of the Worshipful Company of Carpenters at Twickenham. The estate, which is an island site, is situated within a few hundred yards of Strawberry Hill Station, Twickenham Green, and two golf courses, and a special feature of Sir Banister's lay-out is the provision in the centre of the estate of space for ten tennis courts. Plots for some 150 houses are shown on the lay-out giving an average of eight houses to the acre, and the land has been spaced out to allow of the erection of a garage to each house if required by purchasers of the plots.

Victoria.—SHEDS.—In the Southern Railway Company's programme for 1927 an allowance has been made for the erection of cleaning sheds at Victoria Station, S.W.1. The estimate for the building of these sheds, including those at Clapham, is £160,000.

Wilson-street.— PREMISES. — Messrs. Greenham, Ltd., are carrying out the demolition work on the corner site of Wilson-street and Arne-street, W.C.2. The site has been acquired by Messrs. Odham's Press, Ltd.

Wimbledon Common.—BUILDINGS.—Negotiations are taking place for the sale of Belmont, a mansion close to Wimbledon Common, to the Wesleyan Training College for Women Elementary Teachers. Should the purchase of Belmont be concluded it is intended to adapt it to the purposes of a training college, and erect other buildings, and the total cost of the scheme is believed to involve a sum of about £70,000.

COMPARISON OF PRICES OF BUILDING MATERIALS ON DECEMBER 1st, WITH CURRENT PRICES.

Materials.	December 1, 1926.	January 1, 1927.	Rise.	Fall.
	£ s. d.	£ s. d.	%	%
Bricks—				
Best Stocks	4 5 6	4 5 6	—	—
Flettons	2 13 3	2 13 3	—	—
Glazed	23 0 0	23 0 0	—	—
Thames Ballast	0 10 6	0 10 6	—	—
Thames Sand	0 14 6	0 14 6	—	—
Shingle (¾ in.)	0 12 9	0 12 9	—	—
Portland Cement	3 8 0	2 18 0	—	14.71
Ground Blue Lias Lime	2 13 6	2 13 6	—	—
Grey Stone Lime	3 0 9	3 0 9	—	—
Bath Stone	0 2 9½	0 2 9½	—	—
Portland Stone	0 4 4	0 4 4	—	—
Good Sound Building Timber—				
4 in. × 11 in.	28 0 0	28 0 0	—	—
3 in. × 11 in.	25 0 0	25 0 0	—	—
2 in. × 11 in.	25 0 0	25 0 0	—	—
3 in. × 9 in.	24 0 0	24 0 0	—	—
3 in. × 7 in.	20 0 0	20 0 0	—	—
3 in. × 4 in.	22 0 0	22 0 0	—	—
Slates—				
24 in. × 12 in.	37 12 6	37 12 6	—	—
22 in. × 12 in.	34 0 0	34 0 0	—	—
20 in. × 10 in.	25 12 6	25 12 6	—	—
16 in. × 10 in.	17 12 6	17 12 6	—	—
16 in. × 8 in.	13 15 0	13 15 0	—	—
R.S. Joists	12 10 0	12 10 0	—	—
Iron—				
Common Bars	13 0 0	13 0 0	—	—
Mild Steel Bars	10 0 0	10 0 0	—	—
Steel Bars	10 0 0	10 0 0	—	—
Cut Nails	19 0 0	19 0 0	—	—
Sheet Lead	41 10 0	39 10 0	—	4.82
Glass—				
15 oz. Sheet	0 0 3½	0 0 3½	—	—
21 oz. Sheet	0 0 4½	0 0 4½	—	—
26 oz. Sheet	0 0 5	0 0 5	—	—
Raw Linseed Oil	0 3 1	0 3 1	—	—
Turpentine	0 5 3	0 5 0	—	4.76
Ground English White Lead	50 15 0	50 15 0	—	—
White Lead Paint	70 5 0	70 5 0	—	—
Red Lead	42 0 0	42 0 0	—	—

LEGAL LIABILITIES OF ARCHITECTS AND CONTRACTORS

MR. WILLIAM E. WATSON, Barrister-at-Law, F.R.I.B.A., recently read a paper on this subject at the Northern Polytechnic, in the course of which he said that in the time at his disposal it would only be possible to give very slight sketches from different view points; these he had thought of as instances that might reasonably arise in the ordinary and everyday work of either of the two occupations, and it might be well to say first that the usual claim or counterclaim brought against an architect was founded on negligence. This might be defined as a breach of duty to do something which a reasonable or prudent man guided by those considerations which ordinarily regulated the conduct of human affairs would do; or to abstain from doing that which a reasonable or prudent man would not do. The opposites of negligence might be diligence, care or prudence, and when these were not exercised and injury came to another, the negligent person might be liable in damages and might even be criminally liable. It would readily be seen that negligence connoted a duty—for instance, a person driving a motor owed a duty to the pedestrian not to knock him down, and as the degree or extent of this duty varied, so also did the degree or extent of negligence. Therefore, when an architect's services were employed, the employer assumed that the architect was competent to perform the duties reasonably to be expected from him, and a contractual relationship was therefore established.

The architect was in default if he failed to possess that amount of skill and experience which was usual in his profession and which would be exercised by his confrères, but he would not, generally speaking, be held liable for loss resulting either from mere error of judgment on a difficult point or from want of skill in performance of some act not appropriate to be performed by architects; he should not, however, undertake works of skill for which he was not qualified, and it was his duty to know whether or not he was so qualified. For instance, though many architects drew up a form of contract or draft a legal award, such duties did not specially lie within their province, and even although they might not make an extra charge for doing so they might nevertheless lay themselves open to redress if it caused loss to the employer. On the other hand, it sometimes happened that the architect acted under a building contract not in his professional capacity but as arbitrator or quasi-arbitrator to settle disputes or give certificates, and in such cases he was not liable for failure to use the skill ordinarily demanded. If he was employed on account of his skill to determine some point between two or more parties he was not liable in that capacity for (*a*) want of skill, (*b*) ignorance of law, or (*c*) negligence to either builder or employer; in other words, if he was placed in a position where he had to exercise his judgment impartially he was not liable for negligence in the exercise of that judgment.

Again, an architect was not liable when he was directed to use newly introduced inventions, because he was not bound to be more than abreast of his time; a case would illustrate this. An architect was employed to prepare plans for and superintend the erection of model lodging-houses wih the latest improvements, and he was instructed to put in a new patent concrete roofing, which was much cheaper than lead or slate. The concrete roofing proved a failure, and had to be removed and replaced. Action was brought against the architect for negligence. The judge charged the jury that although failure in an ordinary building was evidence of want of competent skill, yet if out of the ordinary course an architect was employed in some novel thing in which he had no experience, and which had not the test of experience, failure might be consistent with skill.

The general test for liability for negligence was that damage must have been caused by the negligence; if advice was negligently given it must be acted upon before any liability could arise. When, however, negligence had been proved the amount of damages was to be measured by the consequent loss to the employer, and it was immaterial that such damages might exceed the amount of the fees due to the architect on the particular contract. Again, it was decided two centuries ago that it was proof of unskilfulness in a profession not to act in accordance with established rules of that profession, and it was frequently on that point that evidence of brother architects assisted a person charged with negligence by his employer. The architect owed a general duty to know and act in accordance with the law so far as it affected his work; a building might be illegal by violating the public law regarding construction and position, and it might also be illegal by the infringement of private rights. This responsibility was frequently passed on to the contractor, who had very numerous burdens to bear; in this particular case the plea that he conscientiously followed the drawings and that the architect periodically visited the works might be a reasonable defence, but on the other hand it must be stated that architects did not come within the penal clauses of the various statutes which were generally directed to owners, occupiers and builders.

Of the 33 Clauses which made up the Royal Institute of British Architects' Form of Contract the architect was named in no less than 29 of them, and among the manifold duties he had to perform, he laid himself open to attack for negligence. His first duty must be to ascertain from the particular contract the extent and purview of his jurisdiction, which would be clearly defined. This would include a responsibility which was well defined by the laws of agency, for the architect was the agent of the employer while building works were in progress. He would have to express satisfaction or dissatisfaction, and he might have to certify both for payment or against payment. He would also have to record a date from which penalties might begin to run and certify extensions of time where necessary. He would have to exercise an impartial judgment as to what were defects arising from defective materials and workmanship at the expiration of the maintenance period; he would have to issue orders in writing for extra works, and many other duties too numerous to mention. Suffice it to say that in default of any of them he laid himself open to attack for negligence in the interests of his employer. On the other hand, where bankruptcy of one of the parties had supervened or a receiver had been appointed, an extra set of burdens was placed upon the architect, for he had to account very accurately regarding the payments he might be called upon to certify. As certifier the architect did not act as an arbitrator; in this condition he might be said to be a preventer of disputes, whereas an arbitrator acted after dispute had arisen, and a rule had been laid down that where a contract provided for the determination of the contractor's claims and liabilities by the judgment of a particular person, everything depended upon that decision, and until he had spoken or certified no right arose which could be enforced either at law or in equity (Scott *v.* Liverpool Corporation, 1858) Therefore the whole onus of resorting to arbitration might reasonably be said to flow from the impartial judgment of the architect.

It might be said that building contracts differed from the sale of a mere chattel, such as a piece of furniture, because building works were affixed to the soil and to remove them would be totally inequitable; that was a peculiarity which placed building contracts on a plane different from other contracts and had led the courts somewhat jealously to watch over the rights of a contractor; on the other hand, if two parties made a contract which was unambiguous, however unreasonable and oppressive it might be, a Court of Justice could not do otherwise than give effect to its terms. It had been said the architect owed a duty to his employer when acting as his agent, and these duties were well defined in the law of agency; he also owed duties to his employer as adviser, as designer, and as supervisor. As adviser his advice must be sound and show good judgment, as, for instance, when the possibilities of a site were being considered or the stability of existing buildings; this would imply a reputed knowledge of local by-laws and conditions generally, but only to such an extent as might reasonably be expected from one who was not a professional lawyer.

As designer the architect contracted to supply plans and specifications prepared with skill and care and capable of being duly executed; skill included judgment, for the employer purchased both skill and judgment, but not necessarily of a superlative character. As designer the architect was required to be conversant with statutory regulations and must have regard to restrictions, whether public or private, and he must, if requested, furnish honest estimates of the cost of materialisation of his design. Failure in this respect might involve a claim in damages, and the agreed amount of remuneration was no guide to the amount of damages which might be claimed.

As adviser or designer the architect stood in the position of an independent contractor whose services the employer could dispense with at his pleasure, but as soon as the contract was signed the architect's duties as agent and supervisor commenced. These would continue normally until the contract was satisfied. These duties included inspection of materials, the quality and quantity of the work, the giving of instructions, the making of corrections and at proper times the provision of further details and explanations, the measurement and certifying for all proper charges, including penalties, the dealing with variations, including omissions and additions, as well as extras, so far as the architect's authority might extend. In all these matters he was the agent of his employer, and it was sound law that no understanding and no payment were permissible whatsoever between the contractor and the architect, or vice versa, unless the employer had knowledge of it and assented to it.

Probably he (the speaker) had said sufficient to demonstrate that there was a large field of responsibility upon the architect in his everyday work; they would now follow the matter into a few concrete examples on the subject of dry rot. Dry rot was known in ancient times, and King Solomon, in rebuilding the Temple, "made narrowed rests round about that the beams should not be fastened in the walls of the house." It was described as the last stages of a disease or state of decomposition in timber induced by fungi; the type peculiar to domestic buildings was called Merulius Lachrymans and was not found in the forest. In Germany no less than forty different species of dry rot were recognised, for some of which only the architect was there held responsible. The spores might lie dormant for many years until conditions favourable to their germination appeared. The presence of an alkali, such as ammonia, was favourable to development, and this was found by emanations from soil or decomposing organic matter; other conditions favourable to development were a warm, still and damp atmosphere, such as existed in cellars and badly ventilated floors covered with linoleum; in fact, it might be found in any part of a building where conditions favourable to development existed. A 7 in. by 3 in. pitch pine joist, the end only of which appeared to have been infected, was cut open, and the mycelium was found in the interior 6 ft. away from the decayed end.

Painting or tarring unseasoned timber shut the embryo fungus into a chamber convenient

for its development. The spores were very minute and light and could be carried on the clothes of a workman from one building to another. Such was dry rot. It seemed as virulent as a plague. With regard to responsibility for it in respect to negligence, suppose the architect was instructed to renovate and add to an old building; his contract would probably provide a twelve-months' maintenance clause, which the contractor would think quite long enough, as a percentage of his money would be held in abeyance; the architect's liability, however, by the statutes of Limitation passed in 1623, lasted for some six years, and might well give time for the dry-rot fungus to develop. It would develop in less time, as the following case would show. An action was brought in 1909 by a building owner against architects and contractors to recover damages for negligence and breach of duty in carrying out alterations at a house. In 1906 the architects were appointed, and the client wished steps to be taken to deaden sound between a sitting-room on the ground floor and a nursery overhead. Lime pugging was used for the purpose. In 1908, after the house had been occupied nearly a year, it was discovered that the whole floor under the nursery was affected by dry rot; the floor had to be removed and replaced at a cost of £120 and the client lost the use of his house while the work was being done; the floor boards were grooved and tongued and there was no ventilation underneath. The architects contended that the trouble was caused by putting down linoleum. The judge, in summing up to the jury, said the question was whether negligence had been proved against the architect or the builder or both, and the jury found against both for £165, adding that "in their judgment there was a minor degree of blame in the defending architects." In another case a Board of Guardians sued their architect for negligence and claimed damages. The building was begun in 1902 and completed in 1905; the final certificate was given to the contractors in the year following. Over £100,000 had been spent upon the building, which covered an extensive area. In 1908 it was found that instead of there being a layer of concrete over the whole area beneath the floor and the joists laid upon it bedded round with finer concrete 2 in. thick, there were wooden pegs driven into the ground with joists nailed thereto and with concrete filling between. A direct communication with the ground was left through the pegs and each peg acted as a pipe for drawing up moisture; the system consequently destroyed the whole purpose for which the concrete was laid down, and the flooring got in so bad a condition of dry rot that it had to be taken up. The architect agreed that he would rectify the work on condition he was not proceeded against, and he employed another contractor to remedy the defects. It was soon discovered that the dry rot was very extensive and not merely local, and, in fact, entailed the re-doing of the whole, whereupon the architect stopped. The employers then engaged another architect and themselves completed the rectification at a cost of some £2,000. They then claimed first for negligence in supervision, and secondly for the issue of a final certificate exonerating the contractor from any liability, and thirdly for breach of agreement to do the necessary repairs if proceedings were stayed. The defence was (1) that the work was not carried out as specified; (2) that it was done by the complicity and fraud of the clerk of works acting with the builder, and it was suggested the manner in which the work was done saved an approximate £400 to the builder; (3) a repudiation of the agreement to rectify the work because it was not under seal. The judge held that the architect had exonerated the contractor from responsibility for dry rot by the issue of his final certificate, but there might yet be the question of fraud and collusion. As the employers were probably debarred from proceedings against the contractor, they naturally claimed against the architect who undertook to rectify the defects, and the learned judge held there was a binding agreement because there was a forbearance to continue proceedings. It was the duty of the clerk of works to call attention to the variation from the specification in the interests of the employer, but it was also the duty of the architect to see that his design was properly carried out. The architect was held liable in law, and judgment was given for the employers with costs on the claim and counterclaim.

[To be concluded.]

COAL STAITHS AT SEAHAM HARBOUR

A PAPER on this subject was read by Mr. Alan Moncrieff, M.A., A.M.Inst.C.E., M.Inst.Struct.E., before the Institution of Structural Engineers recently. The lecturer said that the South Dock at Seaham was completed in 1906, and on the west side the two northernmost berths were equipped with coal staiths. Those staiths consisted of timber trestles at approximately 16 ft. centres, with a deck carried on rolled-steel joists so arranged that there was approximately one joist under each rail. On top of those joists were 10 in. by 10 in. timber cross sleepers at approximately 3 ft. centres, and the decking was composed of 3 in. timber. Those staiths were equipped with eight coal spouts, but only seven of them were in regular use.

In 1911, increased coal shipping facilities being required, the southernmost berth on the west side of the South Dock was equipped with staiths, these being built with steel trestles and a deck arrangement similar to that on the timber ones. One reason for adopting steel trestles was in order to decrease the risks of fire. An examination of the timber staiths, made in 1922-1923, showed clearly that these had been designed for 10½ tons capacity wagons of a total weight of 17 tons.

The steel staiths were designed to carry 15 tons capacity wagons of a total weight of 23 tons. The strengthening of the timber staiths was therefore put in hand in order to render them capable of carrying the increased loads, and was completed in 1924.

Calculations showed that the trestle legs themselves were sufficient for the required loads. These legs were of whole timbers nominally 12 in. by 12 in., although some of them were as small as 10 in. by 11 in. Only in a few cases was it necessary to strengthen the trestle legs by the addition of extra bracing to reduce the effective column length. Investigation showed that the most economical means of strengthening the superstructure of the staiths was to put in a complete system of new girder work. In order to carry the heavier traffic these girders had to be 20 in. by 7½ in. by 89 lb. rolled-steel joists in place of the previously existing corroded joists, which were 12 in. by 6 in. by 54 lb.

In the strengthening of the timber staiths there had been approximately 475 tons of steel and iron work used and 26,000 cubic ft. of new timber work, which latter figure included the renewal of a large number of cross-sleepers and a large proportion of the decking. The problem presented to strengthen the steel staiths at South Berth was much the same as in the case of the timber staiths. There was, however, one vital difference, and that was that the main joists or rail bearers were carried on steel trestle caps on the top of steel legs. It would therefore have been a very serious thing to have contemplated putting in new girders of a deeper section. The method adopted, therefore, was to halve the span by fixing in the middle of each bay underneath the longitudinal girders a new cross beam. This consisted of a 15 in. by 6 in. by 59 lb. rolled-steel joist, which was supported by new longitudinal girders in the form either of rolled-steel joists or of two channels and plates, depending upon whether the axis of the joists forming the trestle legs was at right angles or parallel to the line of the staiths. The strengthening of the steel staiths cost approximately £6,400, which strengthening required about 190 tons of new steel and iron work.

It was then decided that the existing South Dock should be extended with a tongue approximately 400 ft. in length and varying from 200 ft. to 135 ft. in width, at the southern end of the old South Dock, and completed designs were made for the trestles to be of reinforced concrete. The question of the most economical span between the trestles was considered in order to determine the best proportions between the steel girders and the trestles, and spans of 25 ft. centres were ultimately adopted, and considerable attention was given to the form of the reinforced concrete trestles.

The trestle legs were normally 15 in. by 13 in. rectangular section, the only exceptions being those carrying the 50-ft. span girders where the railway lines at cope level passed under the staiths. These particular trestle legs were 18 in. by 14 in. rectangular section.

The concrete proportions used were 7½ cwt. Portland cement, 11 cubic ft. of sand and 22 cubic ft. of gravel.

The steelwork girders carrying the deck were plate-girder type 3 ft. deep, braced together generally with cross diaphragms and wind bracing. Where intermediate supports to the 10 in. by 10 in. cross timbers were necessary the diaphragms were superseded by cross joists, which in their turn carried additional longitudinal joists.

DIARIES AND CALENDARS 1927

"The Builder" Diary.

The Builder has again issued "The Architects' and Surveyors' Pocket Diary" for 1927. It is a pocket diary suitable for the use of members of the Architectural, Surveying and allied professions, and contains a generous diary space, while a supply of squared paper is also bound in. There is a section devoted to technical information and data, while in addition there is a short memorandum on each of the governing bodies of the several professions.

The A.A. Year Book and Diary.

The Architectural Association have issued from 34–36, Bedford-square their Year Book and Diary for 1927, a most attractive publication. Apart from the ample diary space is a large section devoted to technical data, scales of charges, &c., while there is a useful trade directory. In addition there is a large part given over to the rules and activities of the "A.A.," whose services to architecture are so well known and so widely appreciated.

Messrs. Charles Letts & Co.

Messrs. Charles Letts & Co.—who, in 1926, surpassed all previous records by increasing the circulation of their diaries to well over the two million mark—have, for the coming year, issued a number of very attractive diaries of all styles and for all purposes. For personal use, there are many types of diaries comprehensive but not bulky, and at all prices from one shilling upwards. Many styles are fitted with the self-opening Printator Tablet. For office and home requirements there are scores of calendars and office diaries of all kinds, of which, perhaps, the ever-useful "Scribbling Diary" is the most popular.

Other Diaries.

We acknowledge with thanks the receipt of calendars and diaries from the following:—

The Ringmer Building Works; The London School of Printing and Kindred Trades; Messrs. J. Sagar & Co., Ltd.; Messrs. Joseph Freeman, Sons & Co., Ltd.; Mr. Frank S. Mayo; Messrs. Charles P. Kinnell & Co., Ltd.; Callender's Cable and Construction Co., Ltd.; Messrs. Williams and Williams, Ltd.; Messrs. Rd. Johnson, Clapham & Morris, Ltd.; Mr. R. G. Spiller; Messrs. Marshall, Sons & Co., Ltd.; Messrs. Rowe Bros. & Co., Ltd.; Messrs. Allen Everitt & Sons, Ltd.; The Ironite Company, Ltd.; Messrs. W. W. Sprague & Co., Ltd.; Messrs. William Brown & Co., Ltd.; The Patent Victoria Stone Company, Ltd.; Messrs. A. T. Morse, Sons & Co., Ltd.; Messrs. Braithwaite & Co., Engineers, Ltd.; and C. & S. Construction Co.

RATES OF WAGES IN THE BUILDING TRADE

Every endeavour is made to ensure accuracy, but we cannot be responsible for errors.

	Masons	Brick-layers.	Car-penters Joiners	Plas-terers.	Slaters.	Plum-bers.	Pain-ters.	Lab-ourer
Aberdare	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Accrington	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Alfreton	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Alnwick	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Altrincham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Ashford (Kent)	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Ashington	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Ashton-under-Lyne	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Aylesbury	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Aylsham	1/4½	1/4½	1/4	1/4	1/4½	1/4½	1/4½	1/0½
Banbury	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Barnsley	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Barnstaple	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Barrow-in-Furness	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Barry	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Basingstoke	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Bath	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bedford	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Berwick	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bexhill	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Birkenhead	1/10	1/10	1/10	1/11	1/10	1/10	1/9½	1/4½
Birmingham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bishop Auckland	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Blackburn	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Blackpool	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bolton	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bournemouth	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bradford	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bradford-on-Avon	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/0½
Braintree	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Brentwood	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bridgwater	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Bridlington	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2¾
Brighton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bristol	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bromsgrove	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bromyard	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0½
Bungay	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Burnley	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Burton-on-Trent	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bury	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Buxton	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Cambridge	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Canterbury	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Cardiff	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Carlisle	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Chatham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Chelmsford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Cheltenham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Chester	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Chesterfield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Chorley	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Cirencester	1/5	1/5	1/5	1/5	1/5	1/5	1/4	1/1
Clacton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Colchester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Coventry	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Cranbrook	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Crewe	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Cromer	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Darlington	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Deal	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Denbigh	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Derby	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Devizes	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/0½
Dewsbury	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Doncaster	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Dorchester	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/0½
Dorking	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Dovercourt	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Driffield	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Droitwich	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Dudley	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2¾
Durham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Eastbourne	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
E. Glam.(Mon. Val)	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Ely	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Exeter	1/7	1/7	1/7	1/7	1/7	1/7	1/6	1/2½
Exmouth	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Fakenham	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Felixstowe	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Folkestone	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Frome	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Glossop	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Gloucester	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Godalming	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Goole	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Gosport	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Grantham	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Great Yarmouth	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Grimsby	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Guildford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Halifax	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Harpenden	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Harrogate	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Hartlepools	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Harwich	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Hastings	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hatfield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Hednesford	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Hereford	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Herne Bay	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hertford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Hitchin	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Hoddesdon	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Holt	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Huddersfield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Hull	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Hunstanton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Huntingdon	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Isle of Wight	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0½
Ipswich	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Keighley	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Kettering	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Kidderminster	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
King's Lynn	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Lancaster	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Leamington Spa	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Leeds	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Leicester	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Leighton Buzzard	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Lichfield	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Lincoln	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Littlehampton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Liverpool	1/10	1/10	1/10	1/11	1/10	1/10	1/9½	1/4½
Llandudno	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Llanelly	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
London:								
12 m. radius	1/9½	1/9½	1/9½	1/9½	1/9½	1/9½	1/8½	1/4½
12–15 m. radius	1/9	1/9	1/9	1/9	1/9	1/9	1/8	1/4
Loughborough	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Lowestoft	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Luton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Macclesfield	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2¾
Maidstone	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Malvern	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Manchester	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Mansfield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Margate	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Market Harb'rough	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Matlock	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Melton Constable	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Melton Mowbray	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Merthyr Tydfil	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Middlesbrough	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Newark	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Newbury	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Newcastle-on-Tyne	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Newcastle-ur-Lyme	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
New Forest	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Newmarket	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Newport, Mon.	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Northampton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Norwich	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Nottingham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Nuneaton	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Oakham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Oldham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Oxford	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Paignton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Peterborough	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Plymouth	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Pontypridd	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Portsmouth	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Preston	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Ramsgate	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Reading	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Redcar	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Redditch	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Reigate	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Retford	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Ripon	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Rochdale	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Rochester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Rugby	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Saffron Walden	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
St. Albans	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
St. Helens	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Sawbridgeworth	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Saxmundham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0½
Scarborough	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2¾
Sevenoaks	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Sheffield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Shrewsbury	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Sittingbourne	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Southampton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Southend-on-Sea	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Southport	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
South Shields	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Stevenage	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Stockport	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Stockton-on-Tees	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Stoke-on-Trent	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Stourbridge	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stourport	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stowmarket	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Stratford-on-Avon	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Stroud	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Sunderland	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Swaffham	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Swansea	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Swindon	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Tamworth	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2¾
Taunton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Thetford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Torquay	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Totnes	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Trowbridge	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Tunbridge Wells	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Uttoxeter	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Wakefield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Walsall	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2¾
Wallsend	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Warminster	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Warrington	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Warwick	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Wells (Norfolk)	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Welwyn Gar. City	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
West Bromwich	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Weston-sup.-Mare	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Weymouth	1/5	1/5	1/5	1/5	1/5	1/5	1/4	1/1
Whitby	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Wigan	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Winchester	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Windsor	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Wisbech	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Wolverhampton	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Woodbridge	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Worcester	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Worksop	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Worthing	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Wrexham	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Wroxham	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Wymondham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0½
York	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½

(For rates of wages in the Building Trade in Scotland, see page 34.)

ADVERTISEMENT SIGNS ON HOUSES

A POINT of an unusual character appears to have been decided in the recent case Gifford *v.* Dent (*Weekly Notes*, December 11). The plaintiffs were tenants of a shop on the ground floor of certain premises and of the basement, which projected from the face of the building under a stone covering somewhat higher than the pavement of the street. The defendant was the tenant of a front room on the second floor of the building, and he occupied subject to a covenant "not to allow any placard, posters or advertisements whatsoever (other than plates or other similar announcements), unless previously approved," to be erected, placed or fixed in or upon any part of the said premises. He had affixed to the front wall of the building, outside the room he occupied, an illuminated advertisement sign 20 ft. in height and projecting 4 ft. 8 in. from the wall. The report does not state whether this had been done with or without the approval of the landlord, but presumably without approval. The plaintiffs brought this action for an injunction restraining the defendant from allowing the sign to remain fixed to the front wall, and for damages for trespass. The Court held that this sign was not a "plate or other similar announcement," and it was prohibited by the covenant, and that it also constituted a trespass for the plaintiffs, as tenants of the projecting basement were tenants of the space above *usque ad coelum*, and although the Court found that the sign caused neither damage nor annoyance to the plaintiffs, the Court with great reluctance held that in law the plaintiffs were entitled to an injunction.

The case is so unusual we regret that it is not to be reported in an extended form in the Law Reports. In most cases such actions have been brought by the owner or lessor of the premises, and as we have shown (see the *Builder*, October 30, 1925) turn upon the question of fact as to whether there has been an alteration in the fabric, elevation or decoration of the building and the terms of the covenant. In the case Hope Brothers, Ltd. *v.* Cowan (1913, 2 Ch. 312; *The Builder*, June 20, 1913) the lessors of part of a building sought to restrain the lessees of offices from placing window boxes outside the windows supported on brackets. There was no alteration in the structure apparently, and no covenant restraining it, but the plaintiffs, the lessors, contended that the outside walls were not demised in the lease, and it was held that in the absence of context to the contrary the outside walls were included in the lease, a decision which was followed in Goldfoot *v.* Welch (1914, 1 Ch. 213).

In Bickmore *v.* Dimmer (1903, 1 Ch. 158; *The Builder*, December 13, 1902) this was again an action by lessors, and the decision turned on the word "alteration" in a covenant. The tenant, a clockmaker, exposed a clock outside the building, but this it was held in the way it was erected did not affect the structure of the building, and the injunction was refused. This case introduced a new element into the interpretation of such covenants, as there are dicta to the effect that the purpose for which premises are let must also be regarded. There appears, however, to be no case on all fours with that now decided where the action is brought as between two tenants. The fact that the outside walls go with the demise would appear to operate against the plaintiff in this case unless there were mutual covenants which all the tenants could rely upon, and so far as can be gathered from the brief report the main ground of decision was trespass, owing to the projection of the plaintiff's building giving him the right *usque ad coelum* outside the walls. Possibly the editors of the Law Reports may see grounds for reversing their decision not to give an extended report of this case as it appears full of interesting points which can hardly be discussed on the short note in the *Weekly Notes*.

CONTRACTS, COMPETITIONS, &c.

For some contracts still open, but not included in this List, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in; the name and address at the end is the person from whom or place where quantities, forms of tender, &c., may be obtained.

BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, etc.

JANUARY 10.—**Batley.**—BOXES.—Erection of dressing boxes, &c., at the Public Baths, for the T.C. Borough Engineer.

JANUARY 10.—**Bridgwater.**—ALTERATIONS.—Alterations, renovations and repairs to cottages at 4 Court, Albert-street, for the Corporation. H. P. Bishop, Borough Engineer and Surveyor.

JANUARY 10.—**Cambridge.**—ELEMENTARY SCHOOLS.—Construction of two new Elementary Schools: (1) Brunswick School, Newmarket-road; (2) open-air School, Milton-road, for the Borough E.C. Borough Engineer and Surveyor's Office, Guildhall, Cambridge. Deposit £3 3s. for each set of quantities.

JANUARY 10.—**Cardiff.**—ADDITIONS.—Erection of an additional boiler house at the Sanatorium, for the T.C. G. H. Whitaker, City Engineer, City Hall.

JANUARY 10.—**East Ham.**—ADDITION.—To dressing rooms to vapour baths adjoining swimming bath, High-street South, East Ham, for the C.B. Borough Engineer. Deposit £2.

JANUARY 10.—**Frogpool.**—HEATING.—Heating installation on the radiator system, for the Frogpool Wesleyan Church. J. Odgers, Cusgarne, Perranwell Station.

*JANUARY 10. — **Gloucestershire.** — LAUNDRY. — Erection of a proposed new steam laundry, for the Governors of the Gloucestershire Royal Infirmary and Eye. Arthur W. Probyn, 22, Clarence-street, Gloucester; bills of quantities, Vale & Kingsford, St. Aldate-street, Gloucester. Deposit £3 3s.

JANUARY 10.—**London.**—INSTALLATIONS.—Electrical installation at the Frankham-street elementary school (girls and infants), Deptford, S.E., the installation comprising approximately 153 wiring points, for the L.C.C. Chief Engineer of the Council, Old County Hall, Spring Gardens, S.W.1. Deposit £1.

JANUARY 10. — **Nottingham.** — JOINER WORK. — Joiners' and builders' work for the enclosing of five Hospital Ward Balconies with glazed sliding windows, at their Bagthorpe Infirmary, 700, Hucknall-road, for the B.G. W. B. Starr & Hall, architects, 12, Victoria-street.

JANUARY 10.—**Ormskirk.**—HOUSES.—Ten houses on the Tower Hill site, for the U.D.C. Surveyor. Deposit £2 2s.

JANUARY 10. — **Salford.** — HOUSES. — Seventeen houses and flats on the Weaste housing estate, for the C.B. C. Westcott, architect, 13, Bridge-street, Manchester.

JANUARY 10.—**Stanley.** — HOUSES. — Seventy-two houses on South Stanley housing estate, for the U.D.C. A. Routledge, Surveyor, Council Offices, Stanley, co. Durham. Deposit £2 2s.

JANUARY 11.—**Armthorpe.**—INSTALLATION.—Provision and fixing of low-pressure hot-water installation at Armthorpe new school, for the West Riding E.C. Education Department, County Hall, Wakefield.

JANUARY 11.—**Askern Sutton.**—LIGHTING.—Installation of electric light at Askern Sutton-road new school, for the West Riding E.C. Education Department, County Hall, Wakefield.

JANUARY 11.—**Bradford.**—HOUSES.—186 houses at Eccleshill, for the T.C. City Architect.

JANUARY 11.—**Ecclesfield.**—GALLERIES.—Removal of galleries, erection of folding partitions, and repairs at Ecclesfield Burn Cross Council school, for the West Riding E.C. The Education Department, County Hall, Wakefield.

JANUARY 11.—**Farsley.**—ADDITIONS.—Additions and alterations to Farsley Wesley-street Council school, for the West Riding E.C. The Education Department, County Hall, Wakefield.

JANUARY 11.—**Featherstone.**—HOUSES.—Tenders for all trades invited for the erection of the second section of 86 houses on the Ackworth-road housing site, Purston, for the Featherstone U.D.C. Samuel Chesney, A.R.I.B.A., Council Offices, Featherstone, Yorks.

JANUARY 11.—**Flint.**—ROOM.—New store room at the Flint Council school, for the Flintshire E.C. R. G. Whitley, County Architect and Surveyor, County Offices, Mold.

JANUARY 11.—**Gisburn.**—EXTENSION.—To the low-pressure hot-water installation at Gisburn Council School, for the West Riding E.C. Education Department, County Hall, Wakefield.

JANUARY 11.—**Glamorgan.**—PAINTING.—Internal and external painting of Drymma hall, Skewen, near Neath, for the C.C. W. J. Nash, architect, Midland Bank Chambers, Neath.

JANUARY 11. — **London.** — COWSHEDS. — Erection of cowsheds at Chase Farm, The Redgeway, Enfield, for the Guardians of the Edmonton Union. G. A. Lewis, Acting Clerk to the Guardians, 77, Bridport-road, Edmonton, N.18.

JANUARY 11.—**London.**—FENCING.—Supply and erection of iron fencing, cleft oak fencing, and the reinforced concrete foundations upon which the fencings will be erected, to certain boundaries at the Islington Infirmary, Highgate-hill, N., for the Guardians of the Poor of the Parish of St. Mary, Islington. Edmund J. Harrison, L.R.I.B.A., 23, Berkeley-road, Crouch End, N. 8. Deposit £2.

JANUARY 11. — **Northampton.** — HOUSES. — Eight houses in two blocks of four each in High-street, Weston Favell, for the R.D.C. G. Wilcox, surveyor, Duston. Deposit £2 2s.

JANUARY 11.—**Ramsgate.**—HOUSES.—Erection of 100 on the Margate-road housing site, Ramsgate, for the Corporation. Borough Engineer's Office, Ramsgate, on prescribed form, accompanied by a deposit as specified thereon.

JANUARY 11. — **Stanningley, Leeds.** — EMPLOYMENT EXCHANGE.—Erection of at Stanningley, for the Commissioners of His Majesty's Office of Works. Contracts Branch, King Charles-street, London S.W.1. Deposit £1 1s. (Cheques payable to the Commissioners.)

JANUARY 11.—**Stocksbridge.**—SCHOOL.—New school for 1,130 children at Stocksbridge, for the West Riding E.C. Education Department, County Hall, Wakefield.

JANUARY 12. — **Ampthill.** — CONVENIENCES. — For (1) new public conveniences in Bedford-street; (2) depot and stores; (3) alterations to fire station; (4) electric wiring for the whole of the above, for the U.D.C. F. W. Walker, surveyor, 105, Dunstable-street. Deposit £2 2s.

JANUARY 12.—**Benfieldside.**—HOUSES.—Twenty-two semi-detached houses at Shotley Bridge, for the U.D.C. Surveyor.

JANUARY 12. — **Bordesley Green, Birmingham.** — POSTMEN'S OFFICE.—Erection of at Bordesley Green, for the Commissioners of His Majesty's Office of Works. Contracts Branch, King Charles-street, London, S.W.1. Deposit £1 1s. (Cheques payable to the Commissioners.)

JANUARY 12.—**France and Belgium.**—HEADSTONES.—Total supply of 12,000 headstones (packed and delivered (f.o.r.), to be divided into a number of contracts, none of which shall be for less than 100 headstones, for the British Military Cemeteries in France and Belgium. The Secretary, Works Department, Imperial War Graves Commission, 82, Baker-street London, W.1, and marked "Headstone Contract, 5079/31."

JANUARY 12.—**Manchester.**—SCHOOL.—Erection of the Barlow Moor-road Municipal School, Choriton-cum-Hardy, for the E.C. P. M. Heath, Town Clerk. Deposit £2 2s.

JANUARY 12.—**Middleton.**—HOUSES.—Erection of 158 houses, for the Town Council. Borough Architect, Town Hall, Middleton, Lancs. Deposit £2 2s.

JANUARY 13.— **Antrim.** — COTTAGES. — Fifty labourers' cottages and for fencing the plots connected therewith, for the R.D.C. Council's Engineer.

JANUARY 13.—**Cardiff.**—EMPLOYMENT EXCHANGE.—Erection of, at Bute Docks, Cardiff, for the Commissioners of His Majesty's Office of Works. Contracts Branch, King Charles-street, London, S.W.1. Deposit £1 1s. (Cheques payable to the Commissioners.)

JANUARY 13.—**Liverpool.**—ALTERATIONS.—To the Upper Park-street Council school, for the T.C. Land Steward and Surveyor.

JANUARY 13.—**West Stanley.**—BUILDINGS.—New Court buildings adjoining the Police Station at West Stanley, for the Durham C.C. W. J. Merrett, County Surveyor, 48, Old Elvet, Durham.

JANUARY 14.—**Birkenhead.**—FLATS.—Thirty flats on land fronting Railway-road, for the C.B. C. Brownridge, Borough Engineer and Surveyor. Deposit £2 2s.

JANUARY 14.—**Birkenhead.**—HOUSES.—Thirty-eight parlour type houses on land fronting Hurrell-road, for the C.B. C. Brownridge, M.Inst.C.E., Borough Engineer and Surveyor. Deposit £2 2s.

JANUARY 14.—**Caernarvon.**—COTTAGES.—Two workmen's cottages at Morfa Seiont, Caernarvon, for Morris & Jones, Ltd. L. L. Jones, architect and surveyor, Lloyds Bank Chambers.

JANUARY 14.—**Crewe.**—HOUSES.—150 houses in three contracts as follows:—Contract No. 193—84 houses in rows and semi-detached on West End Garden City site; contract No. 194—50 semi-detached houses at the junction of Minshull new road and Pym's-lane; contract No. 195—16 semi-detached houses at the junction of Victoria avenue and West-street, for the T.C. E. G. Timbrell, Architect to the Housing Committee, Municipal Buildings. Deposit £2 2s.

JANUARY 14.—**Dublin.**—VARIOUS.—Plumbing, gasfitting and ironmongery work in the Dublin district, for the Commissioners of Public Works. Secretary, Office of Public Works, Dublin. Deposit £1.

JANUARY 14.—**Lichfield.**—HOUSES.—Sixteen parlour type houses in Trent Valley-road, Lichfield, together with contingent works, for the T.C. P. A. Benn, City Engineer and Surveyor. Deposit £2 2s.

JANUARY 14. — **Liverpool.** — PAINTING. — External painting, &c., at the Central Technical School, Byrom-street, for the T.C. Land Steward and Surveyor.

JANUARY 14.—**Thurnscoe.**—HOUSES.—Twenty-four houses at Thurnscoe, near Rotherham, for the U.D.C. Carby, Hall & Sons, architects, Prudential Buildings, Park-row, Leeds. Deposit £2.

JANUARY 15.—**Burntisland.**—HOUSES.—Forty houses at the Haugh, for the T.C. J. A. Waddell, Burgh Surveyor. Deposit £2 2s.

JANUARY 15. — **Glasgow.** — CONVENIENCE. — Construction of a public convenience at the corner of James-street and North-street, Whiteinch, for the T.C. J. Lindsay, Town Clerk.

JANUARY 15.—**Hemsworth.**—HOUSES.—Forty non-parlour type houses, together with the necessary roads, sewers, fences and footpaths, at Grove-lane, Hemsworth, near Pontefract, for the U.D.C. Alva Wright, Clerk. Deposit £1 1s.

JANUARY 15.—**Kingsbridge.**—HOSPITAL.—Cottage hospital, on a site fronting the Plymouth-road, for the Kingsbridge and Salcombe and District Hospital Committee. J. Hole, Borough Surveyor, Kingsbridge. Deposit £1 1s.

JANUARY 15. — **Marple.** — HOUSES. — Twenty-six houses on the Brindley Farm housing site, for the U.D.C. D. L. Diver, surveyor.

JANUARY 15.—**Solihull.**—HOUSES.—Erection of a number of non-parlour type of houses at the undermentioned places, viz., Shirley, 12 houses, Olton-road; Elmdon, four houses, Damson-lane; Knowle, eight houses, Norton's Green-road, Tanworth, four houses, Rushbrook-lane; Tanworth, four houses, Springbrook-lane, for the R.D.C. C. H. Cook, Clerk. Deposit £1 1s.

JANUARY 16.—**Crymmych.**—EXTENSION.—Extending and renovating the Antioch Chapel, Crymmych. J. Evans, Auckland-terrace.

JANUARY 17.—**Bristol.**—BUILDINGS.—Annexe to Avonmouth sub-station; construction of two above-ground sub-stations at Filton Park and Hanham; extension of above-ground sub-station at Sea Mills, for the T.C. H. Faraday Proctor, Chief Engineer and General Manager, Electricity Offices, Colston-avenue. Deposit £2 2s.

JANUARY 17.—**Caersws.**—CONVERSION.—Of portions of present building into new casual wards, together with new sanitary offices, &c., at the Poor Law Institution, Caersws, for the Newtown and Llanidloes B.G. A. S. Hill, architect, Severn-square, Newtown. Deposit £1 1s.

JANUARY 17.—**Crompton.**—HOUSES.—Seventy-eight non-parlour houses at Twingates and Smallbrook housing sites, for the U.D.C. F. T. Jones, engineer and surveyor. Deposit £3 3s.

JANUARY 17.—**Edinburgh.**—PAINTING.—Hostels for women students, for the Association of Women Students at Craigmillar Park, Edinburgh. F. Wood, architect, 6A, George-street.

JANUARY 17.—**Hull.**—HOUSES.—Eighteen non-parlour two bedroom type houses on the East Hull housing site, for the T.C. City Architect.

JANUARY 17.—**Leeds.**—EXTENSION.—Of the Meanwood Working Men's Club, for the Committee. Carby Hall & Sons, architects, Prudential Buildings, Park-row, Leeds. Deposit £2 2s.

JANUARY 17. — **Maldon.** — CONVENIENCE.— Public convenience in Princes-street, for the T.C. Borough Engineer.

JANUARY 17. — **Maldon.** — HOUSES. — Fifty semi-detached houses in two types in Cross-road and Mundon-road, for the T.C. Borough Engineer.

JANUARY 17.—**Oakengates.**—SHED.—Store shed at the sewage farm, Trench, Wellington, Salop, for the U.D.C. Surveyor, Council Chambers.

JANUARY 17.—**Settle.**—HOUSES.—Six houses at Four Lane-ends, Giggleswick, for the R.D.C. T. A. Foxcroft, surveyor.

JANUARY 17. — **Shipley.** — HOUSES. — Sixty-eight houses on the Albert-road estate, for the U.D.C. H. Dawson, surveyor and architect. Deposit £2 2s.

✱JANUARY 17.—**York.**—HOUSES.—Erection of 42 brick houses (scullery type) on the Tang Hall Estate, No. 2, for the Housing Committee of the York Corporation. F. W. Spurr, City Engineer, Guildhall, York. Deposit £2 2s.

JANUARY 18.—**Bootle.**—SHOPS.—Sixteen lock-up shops with sixteen flats above, on Bailey-drive, for the Corporation. Borough Engineer and Surveyor. Deposit £2 2s.

JANUARY 18. — **Bridlington.** — HEAD POST OFFICE. —Erection of Post Office, &c., at Bridlington, for the Commissioners of His Majesty's Office of Works Contracts Branch, King Charles-street, London, S.W.1. Deposit £1 1s. (Cheques payable to the Commissioners.)

JANUARY 18.— **Carreghofa.** — BUILDING. — Semi-permanent building for use for practical work and as a classroom, at the Carreghofa Council school, near Llanymynech, for the Montgomery E.C. Ll. Phillips, Director and Clerk, County Education Offices, Newtown. Deposit £1 1s.

JANUARY 18.—**Sheffield.**—HOUSES.—111 houses on the Longley estate, for the T.C. W. Geo. Davies, City Architect. Deposit £2.

JANUARY 19. — **Plymouth.** — ALTERATIONS AND ADDITIONS.—To H.M. Customs Waterguard Offices, Plymouth Docks, for the Commissioners of His Majesty's Office of Works. Contracts Branch, King Charles-street, London, S.W.1. Deposit £1 1s. (Cheques payable to the Commissioners.)

JANUARY 19. — **Swansea.**—GLAZING. — Proposed renewal of the patent glazing, &c., of the roofs at the Corporation Market, Oxford-street, for the Corporation. Ernest E. Morgan, A.R.I.B.A., Borough Architect, 3, Prospect place, Swansea. Deposit £1 1s.

JANUARY 20.—**Camelford.**—HOUSES.—At Tintagel six houses, St. Breward eight houses, Lanteglos six houses, Derabole eight houses, Boscastle two houses, for the R.D.C. A. R. Hansford, Building Surveyor. Deposit £2 2s.

✱JANUARY 21.—**Watford.**—HOUSES.—Erection of 124 on the Harebreaks housing estate extension, north-west of Gammons Farm, for the Corporation. W. W. Newman, A.M.I.C.E., F.S.I., Borough Engineer, on payment of a deposit cheque for £2 2s, payable to the Borough Treasurer, Municipal Offices, Watford.

JANUARY 22.—**Bedford.**—FLATS.—Erection and completion of eight parlour-type houses and sixteen non-parlour type flats in Elstow-road, Kennedy-road, and Miller-road, for the Borough Council. Borough Engineer and Surveyor, Borough Surveyor's Office, Newnham House, Horne-lane, Bedford. Deposit £2 2s.

JANUARY 22.—**Methley.**—HOUSES.—Thirty-four semi-parlour type houses, to be built in blocks of two, on a site in the Mickletown area, for the U.D.C. T. Thompson, architect, Red House.

JANUARY 24.—**Birkenhead.**—OFFICES.—New waterworks offices on land adjacent to the waterworks depot, Borough-road, Birkenhead, for the C.B. R. F. Baker, Water Engineer, 52, Balls-road. Deposit £2 2s.

JANUARY 24.—**Huddersfield.**—ADDITIONS.—Alterations and additions to the underground lavatories, Market-place, for the C.B. W. Jaggar, Borough Engineer and Surveyor, 1, Peel-street.

JANUARY 24.—**Pontefract.**—HOUSES.—170 houses on the Baghill site, for the T.C. W H. Newton, Municipal Offices. Deposit £5.

JANUARY 25.—**Bolsover.**—HOUSES.—Thirty houses at Whaley Thorns, for the U.D.C. Sydney Hoten, surveyor. Deposit £2 2s.

JANUARY 26. — **Hemel Hempsted.** — HOUSES.— Erection of 10, in two blocks of four, and one pair, in Highfield-lane, Hemel Hempsted, for the Corporation. A. Murray-Smith, A.M.Inst.C.E., Borough Surveyor, Market-square, Hemel Hempsted.

JANUARY 27. — **Tottenham.**—HOUSE. — Superintendent's house and offices at Tottenham Cemetery, for the Tottenham and Wood Green Burial Board. J. C. S. Mummery, A.R.I.B.A., of 34, Bloomsbury-square, W.C.1.

✱JANUARY 28.—**Castle Donington.**—HOUSES.— Erection of eight houses in two contracts as follows: Contract No. 1, four semi-detached houses at Tonge. Contract No. 2, four semi-detached houses at Breedon for the R.D.C. Arthur Eaton & Son, F.R.I.B.A., 6, The Strand, Derby.

JANUARY 29.—**Crediton.**—HOUSES.—Sixteen houses at Newton St. Cyres, near Crediton, for the R.D.C. E. O. Harding, architect and surveyor, 34, Prospect Park, Exeter.

JANUARY 31. — **Oldham.** — GENERAL BUILDING WORKS.—Erection, completion and maintenance of the superstructure and machine foundations upon a reinforced concrete foundation raft already prepared, at their new generating station, Slacks Valley, Chadderton, for the Electricity Committee. F. L. Ogden, Borough Electrical Engineer, Greenhill Offices, Oldham. Deposit £1 1s.

✱JANUARY 31.—**Portsmouth.**—HOSPITAL BUILDINGS, &c.—Erection of new block for 62 female patients and the provision of a new 9 in. sewer, for the Committee of Visitors of the City of Portsmouth Mental Hospital Milton. Committee's Architect, E. H. Harvey, Guildhall-square, Portsmouth. Deposit £3 3s.

FEBRUARY 8.—**Stoke and Wolstanton.**—HEATING.— Alterations and additions to the central-heating and hot-water services at the London-road institution, near Newcastle, Staffordshire, for the B.G. Edwards & Shaw, consulting engineers, Birmingham. Deposit £5 5s.

FEBRUARY 9. — **Stretford.** — SCHOOL. — Secondary school for boys at Stretford, near Manchester, for the Lancashire E.C. County Architect, 16, Ribblesdale-place, Preston. Deposit £2.

✱NO DATE.—**Horsham**—ALTERATIONS.—Structural alterations at the premises, 62-63, West-street, Horsham. Timothy White Co., Ltd. (Construction Dept.), 30, Chandos-street, Portsmouth.

NO DATE.—**Lanark (Lower Ward).**—HOUSES.— Thirty-six houses at Barnflat-street site and thirty-six houses at Farme site, for the D.C. of the C.C. Jas. A. M'Callum, District Clerk, 15, West George-street, Glasgow.

NO DATE.—**Welwyn.**—BUILDING.—Class-room wing at the Church of England schools, for the Managers. Barker & Kirk, architects, 11, Buckingham-street, Strand, W.C.2. Deposit, £1 1s.

NO DATE.—**Westport.**—RECONSTRUCTION.—Reconstruction and enlargement of the parish church, Westport, co. Mayo, for the Rev. P. Patterson, Adm. R. M. Butler, F.R.I.B.A., architect, 23, Kildare-street, Dublin.

MATERIALS, etc.

JANUARY 10.—**Bexley.**—MATERIALS.—Tar and other road surfacing proprietary articles, highway materials, best glazed stoneware socketed pipes, and best Portland cement, for the U.D.C. W. T. Howse, Surveyor.

JANUARY 10.—**Bristol.**—MATERIALS.—Shingle and sand, glass, rubble stone, broken stone and topping, bricks, slates, drain pipes, &c., for the Port Authority. T. A. Peace, engineer, Chief Engineer's Office, Avonmouth.

JANUARY 10.—**London.**—MATERIALS.—White lead, oils, hoggin, ballast, sand, granite, York paving, tarred materials, cement, firebricks, &c., asphalte paving work stoneware, sanitary pipes, &c., and sewer ironwork, &c., for the Camberwell B.C. W. Bell, Borough Engineer and Surveyor, Town Hall, Camberwell, S.E.5.

JANUARY 10.—**Melbourne.**—STEEL PIPE-LINE.—**For approximately 700 tons of 30 in. to 51 in. steel pipe-line with accessories, for the State Electricity Commissioners of Victoria. Department of Overseas Trade, 35, Old Queen-street, S.W.1.**

JANUARY 10.—**West Sussex.**—MATERIALS.—For (1) broken granite, quartsite or other approved stone and chippings; also tarred macadam; (2) picked surface flints and pit flints, and washed shingle and sand suitable for surface tar treatment; also binding materials, for the C.C. H. W. Bowen, County Surveyor, County Surveyors' Office, Southgate House, Chichester.

JANUARY 12.—**Dorset.**—MATERIALS.—**Tarmacadam, granite, basalt, limestone, refined tar and bituminous or other like surface dressing, for the C.C. County Surveyor, County Offices, Dorchester.**

JANUARY 13.—**Lichfield.**—MATERIALS.—Works of armoured concrete foundation, block slag or granite for road foundations, broken slag or granite, curbs and channels, sett channels, stoneware gullies, sanitary pipes, gully grids and frames, and other castings, for the T.C. P. A. Benn, City Engineer and Surveyor.

JANUARY 14.—**Montgomery.**—MATERIALS.—Broken granite or other approved stone and binding material, tarred macadam, chippings suitable for surface tar treatment, and tar, for the C.C. T. L. Oliver, County Surveyor, County Surveyor's Office, Welshpool.

JANUARY 17. — **Staines.** — MATERIALS. — Road materials (including tarmacadam, macadam, chippings), &c., gravel, washed shingle, sand and hardcore, tar and tar compounds, for the R.D.C. D. C. Fidler, engineer and surveyor, London-road, Ashford.

✱JANUARY 19.—**Chelsea.**—ARTICLES.—Supply and execution of various articles and works, the contract period being from April 1 next to March 31, 1928, for the Council of the Metropolitan Borough of Chelsea. Contracts 1, 3 and 4, Town Clerk; other contracts, Borough Surveyor, Town Hall, King's-road, Chelsea, S.W.3.

JANUARY 19.—**Isle of Wight.**—MATERIALS.—Granite and granite chippings, bitumen and bitumen compounds, refined tar, surface dressing, approximately 800,000 yds. super., for the C.C. A. J. A. Harris, Highways Surveyor, County Hall, Newport, I.W.

JANUARY 19.—**Southport.**—PIPES.—About 337 tons of cast-iron spigot and socket pipes, 12 in. in diameter, or alternatively an equivalent length of steel pipes lined internally and protected externally, for the Southport, Birkdale, and West Lancashire Water Board. C. Burton Ede, Engineer and Manager, 14, Portland-street, Southport.

JANUARY 22.—**Essex.**—MATERIALS.—Stoneware pipes, distilled tar, broken granite, tarred slag, for the C.C. Wm. H. Morgan, Chartered Civil Engineer, County Surveyor, Old Court, Chelmsford.

JANUARY 24.—**Devon.**—MATERIALS.—Tarmacadam, granite, basalt, limestone, refined tar, bituminous compounds, lubricating oil, for the C.C. F. E. Simpson, County Surveyor, No. 2 Division, 21, Southernhay West, Exeter.

JANUARY 24.—**Lindsey.**—MATERIALS.—Tarred macadam, broken stone and slag, refined tar, for the C.C. A. G. Bradshaw, County Surveyor, County Offices, Newland, Lincoln.

FEBRUARY 1.—**Karachi (India).**—PIPES.—**37,000 cwts of cast iron pipes from 3 in. to 27 in. diameter; 33 in. rising main of cast-iron pipes and sluice valves, stop valves and back pressure valves, for the Corporation. Chief Engineer, Municipal Offices.**

FEBRUARY 15.—**Tottenham.**—MATERIALS.—Asphalt and tar paving, artificial stone paving, &c., for the U.D.C. E. Townson, Clerk, Town Hall, Tottenham, N. 15.

ENGINEERING, IRON AND STEEL.

JANUARY 10.—**Bristol.**—BUILDING.—Construction of two granaries; also additions to existing bands, at the Royal Edward Dock, Avonmouth, for the Port Authority. Thomas A. Peace, Engineer, Chief Engineer's Office, Avonmouth Docks. Deposit £5.

JANUARY 10.—**Market Harborough.**—BRIDGE.—Reinforced concrete road bridge over the Grand Junction Canal at Lubenham, for the R.D.C. F. C. Salmon, surveyor, Kibworth, Leicester.

JANUARY 12.—**Calcutta.**—BRIDGE.—Dismantling and reconstruction of the Chitpore Bridge over the Circular Canal, for the Improvement Trust. Chief Engineer, 5, Clive-street, Calcutta.

JANUARY 12.—**Kirkcaldy.**—WIDENING.—Of road and bridge over railway at Lochore, Fifeshire, for the D.C. of Fife C.C. District Road Surveyor, Hunter street, Kirkcaldy.

JANUARY 12.—**Middlesex.**—BRIDGE.—Construction of a new ferro-concrete and brick bridge of five spans, 26 ft. 6 in. each, on the square, to carry the new road over the L.M.S. Railway main line adjacent to Selvage-lane, Mill Hill, for the C.C. A. Dryland, County Engineer, Guildhall, Westminster. Deposit £21.

JANUARY 13.—**Southampton.**—GAUGE.—For (1) three reinforced concrete dolphins to be erected in Southampton Water and the Solent; and (2) structure for tide gauge to be erected at Calshot, for the Harbour Board. E. Cooper Poole, engineer, Harbour Offices, Town Quay.

JANUARY 14.—**Atcham.**—BRIDGE.—Construction of a new ferro-concrete bridge over the River Severn and approach roads at Atcham, near Shrewsbury, for the Salop C.C. W. H. Butler, County Surveyor, County Buildings, Shrewsbury. Deposit £5.

JANUARY 20. — **Lachmanghula.** — BRIDGE. — Cables and steelwork of a suspension bridge to be built at Lachmanghula, Dehra Dun district, for the United Provinces of Public Works Dept. H. V. S. Dillon, Executive Engineer, Meerut Provincial Division, India.

JANUARY 25.—**Marsden.**—IMPROVEMENT.—Erection of a reinforced concrete bridge (over River Colne), widening of existing roadway, erection of stone retaining and fence walls, road forming, and other contingent works incidental thereto, in Church-lane, for the U.D.C. Abbey and Hanson, civil engineers, 11, Cloth Hall-street, Huddersfield. Deposit £2 2s.

JANUARY 31. — **Egypt.** — BARRAGE. — Construction of a barrage and subsidiary works on the River Nile, near Nag Hammadi, for the Ministry of Public Works of the Egyptian Government. Goode, Fitzmaurice, Wilson & Mitchell, Consulting Engineers to the Egyptian Government, 9, Victoria-street, Westminster; or the Legation of the Egyptian Government, 7, Charles-street, Berkeley-square, W.1.

FEBRUARY 24.—**Port Elizabeth.**—PLANT.—Supply and erection of a plant of the stationary type covering the whole cycle of operations necessary for the manufacture of bituminous asphaltic mixtures or tar macadam required for the construction of paved carriageways and footways, namely, drying, heating, measuring or weighing and mixing economically and with accuracy and the running of same for a period of two weeks after completion of erection, for the T.C. Department of Overseas Trade, 35, Old Queen-street, S.W.1. (A.X. 4045).

ROAD, SEWERAGE, AND WATER WORKS.

JANUARY 10.—**Bognor.** — RECONSTRUCTION — Of High-street from Campbell-road to York-road, including the construction of a reinforced concrete and mastic asphalt carriageway, together with surface water sewers, &c., for the U.D.C. J. Draper, surveyor. Deposit £3 3s.

JANUARY 10.—**Disley.**—MAKING-UP.—Making-up, surfacing, rolling, draining, and forming a footpath on a portion of Buxton Old-road, extending to about 2,200 super. yds., at Jackson Edge, for the R.D.C. J. W. Pearson, surveyor. Deposit £1 1s.

JANUARY 10.—**Disley.**—PAVING.—Re-paving a portion of Buxton Old-road, extending to about 220 super. yds., near "The White Horse" Hotel, Disley, and also for certain repairs to existing paving, for the R.D.C. J. W. Pearson, surveyor. Deposit £1 1s.

JANUARY 10. — **Hendon.** — KERBING. — Kerbing, channelling, road widening and other works at Parson-street, Holders Hill-road, and the Ridgway, for the U.D.C. A. O. Knight, engineer and surveyor. Deposit £10.

JANUARY 10.—**Kilmarnock.**—SEWERS.—For (*a*) the laying of 1,620 lineal yards of water piping, (*b*) supply and laying of 1,050 lineal yards of fireclay sewers, (*c*) the excavation and bottoming of 8,900 square yards of roadway, and (*d*) other necessary works in connection with the scheme for the erection of houses at London-road, for the T.C. W. Dunbar, Burgh Surveyor, Market Bridge.

JANUARY 10.—**London.**—SEWERS.—Constructon of sewers for the second section of the Grove Park housing scheme: 1,082 ft. run of 12 in. pipe; 557 ft. run of 9 in. pipe soil sewers; 678 ft. run of 12 in. pipe; 1,093 ft. run of 9 in. pipe, for the Lewisham B.C. Borough Surveyor, Lewisham Town Hall, Catford, S.E.6.

JANUARY 10.—**Penarth.**—IMPROVEMENTS.—Private improvement in Clinton-road, for the U.D.C. E. I. Evans, surveyor.

JANUARY 10.—**Steyning.**—STREET WORKS.—Street works in Cecil-road and King's-road, Lancing, for the R.D.C. C. H. Wright, engineer and surveyor, Western-road, Shoreham-by-Sea. Deposit £1 1s.

JANUARY 11.—**Doncaster.**—SEWERS.—Construction of 42 ft., 36 ft., and 10 ft. roads, and 9 in. and 6 in. sewers and surface water drains for the Eden-grove re-housing scheme. F. Oscar Kirby, Borough Engineer, 2, Priory-place. Deposit £1 1s.

JANUARY 11.—**Sittingbourne.**—RECONSTRUCTION.—Of a section of footway in the High-street, between Nos. 10 and 74, for the U.D.C. The works consist approximately of 250 yds. run of granite kerbing, 600 yds. super. of granolithic paving, 62 yds. run of surface water sewer, and other miscellaneous works connected therewith. M. W. Lashmar, surveyor.

JANUARY 12.—**Middleton.**—SEWER.—250 yards of 12 in. diameter stoneware pipe sewer in Woodland-way and Hall-drive, for the T.C. Borough Engineer and Surveyor.

JANUARY 12.—**Middleton.**—SEWER.—Making and sewering, &c., of the following new streets, in connection with the Boarshaw North housing scheme: (*a*) Tennyson-road, (*b*) Chaucer-road, (*c*) Byron-road, (*d*) Kingsley-road, (*e*) Wordsworth-road, and (*f*) Browning-road, for the T.C. Borough Engineer.

JANUARY 12.—**Rochdale.**—PAVING.—Paving and completion of certain parts of Bernard-street and Gale-street, and for the sewering of certain parts of Clayton-street, Cardigan-street, and three passages off Whit-worth-road, for the T.C. Borough Surveyor.

JANUARY 13.—**Larne.**—PIPES.—Laying 1,444 lineal yards of 4 in. and 120 yards of 3 in. cast-iron water pipe, together with the necessary hydrants, valves, collecting tank, &c., in connection with the provision of a supply of water for the district of Woodburn, Carrickfergus, for the R.D.C. S. Robinson, engineer, Victoria-street.

JANUARY 14.—**West Bromwich.**—REPAIRS. — To roads at the Guardians' Institution, Hallam-street, for the B.G. A. H. Ward, clerk, 22, Lombard-street.

JANUARY 15.—**Staines.**—REPAIRS.—To certain private streets, for the U.D.C. E. J. Barrett, engineer and surveyor.

JANUARY 17.—**Guildford.**—SEWERS.—Construction of concrete roads and sewers on the Aldershot-road housing site, for the T.C. J. W. Hipwood, Borough Surveyor.

JANUARY 17.—**Rathmines and Rathgar.**—ROAD.—Construction of road from Ranelagh-road to Sandford-road, for the U.D.C. Surveyor.

JANUARY 17. — **Saddleworth.** — WIDENING. — Of Huddersfield and New Hey main road, at Denshaw, for the West Riding C.C. West Riding Surveyor, County Hall, Wakefield. Deposit £1.

JANUARY 17.—**Staines.**—WIDENING.—General road work in connection with the widening of Sunbury-road, Hanworth, including reinforced concrete raft, kerbing and storm water sewers, for the R.D.C. D. C. Fidler, engineer and surveyor, London-road, Ashford.

JANUARY 18.—**Godstone.**—DRAINAGE.—Construction of about 940 yards of 9 in. diameter stoneware and cast-iron pipe sewers with the necessary manholes and other appurtenances, also for the construction of detritus settlement tanks, filter beds, humus tanks, sludge and humus beds and lines of pipes, and for making alterations to existing works at their sewage treatment works, for the R.D.C. John Taylor & Sons, engineers, Caxton House, Westminster, S.W.1. Deposit £5.

JANUARY 18.—**Mitcham.**—MAKING-UP.—Of (*a*) Annie-road, (*b*) Milton-road, (*c*) Stanley-road, for the U.D.C. Surveyor, Broadway House, London-road, Lower Mitcham.

JANUARY 19.—**Chartham.**—DRAINS.—Construction of about 600 yards of 6 in. and 9 in. diameter stoneware effluent drains, with the necessary manholes and other appurtenances, also for the construction of settlement tanks, filter beds, humus tank, sludge and humus beds and lines of pipes, and for making alterations to existing works at their sewage treatment works, for the Kent County Mental Hospital Committee. John Taylor & Sons, engineers, Caxton House, Westminster, S.W.1. Deposit £5.

JANUARY 19.—**Prestwich.**—MAKING-UP.—Sewering, and draining Circular road, in three sections, as follows: (1) From Buckingham-road to passage to back George-street; (2) from passage to back George-street to Bland-road; (3) north from Bland-road to Hilton-crescent, opposite Chandos-road (a portion of which is now called Chandos-road), for the U.D.C. M. A. Piercy, Engineer and Surveyor. Deposit £1 1s.

JANUARY 22.—**Farnborough.**—STREET WORKS.—Improvements in Osborne and Park-roads, for the U.D.C. J. E. Hargreaves, Surveyor. Deposit £2 2s.

JANUARY 24. — **Chester.** — SEWERAGE. — Sewerage works, comprised in sections 4 and 5 of the Hand-bridge sewerage scheme, to be constructed in glazed stoneware pipes, up to 12 in. in diameter, and concrete pipes, 15 in. diameter, for the T.C. C. Greenwood, City Engineer and Surveyor. Deposit £1 1s.

JANUARY 24.—**Faversham.**—SEWERAGE.—Sewerage and sewage disposal in the parishes of Teynham and Lynsted. The works will comprise 4,147 yards of 7 in. diameter stoneware and 149 yards of cast-iron sewers, 1,156 yards of 9 in. diameter stoneware and 49 yards of cast-iron sewers, together with all manholes, ventilation columns, &c., sedimentation tanks, filter beds, and all works incidental thereto, for the R.D.C. Howard Humphreys & Sons, consulting engineers, 28, Victoria-street, Westminster, S.W.1. Deposit £3 3s.

JANUARY 25.—**Ossett.**—ROAD.—Construction of a 6 in. foul sewer and of the pitched stone foundations for a new road on the Queen's-drive estate, for the T.C. H. Holmes, Borough Engineer and Surveyor.

Competitions.

(See Competition News page 4.)

Auction Sales, Tenders, etc.

JANUARY 13.—**Kent.**—Knight, Frank & Rutley, will sell at "The Royal Star" Hotel, Maidstone, included in the sale of this estate, Kentish Hills, Addington Park, between Maidstone and Sevenoaks, beautifully timbered building sites, with main water and main road frontages. Auctioneers, 20, Hanover-square, W.1.

✱JANUARY 18.—**Wallington, Surrey.**—Dixon & Co. will sell, on the premises, Bute-road, Wallington, plant and machinery of a building contractor. Auctioneers, 2, Woodcote-road, Wallington, and at Railway-approach, Sutton and Cheam.

Public Appointments.

✱JANUARY 10.—**Birkenhead.**—DISTRICT BUILDING INSPECTOR required by the Corporation. Charles Brownridge, M.Inst.C.E., Borough Engineer and Surveyor, Town Hall, Birkenhead.

JANUARY 11.—**Cardiff.**—ASSISTANT BUILDING INSPECTOR required by the City Council. G. H. Whitaker A.M.Inst.C.E., City Engineer, City Hall, Cardiff, endorsed "Building Inspector," with copies of not more than three testimonials.

JANUARY 12.—**Southampton.**—JUNIOR DRAUGHTSMAN (Grade II) required by the County Borough Council. A. L. Roberts, County Architect, the Castle, Winchester, and enclosing copies of three testimonials (original testimonials will not be returned).

✱JANUARY 15.—**Hendon.**—ARCHITECTURAL ASSISTANT.—Second architectural assistant in the department of the Engineer and Surveyor required by the Hendon U.D.C. Henry Humphris, Clerk to the Council, Town Hall, Hendon.

JANUARY 17.—**Essex.**—ARCHITECTURAL ASSISTANT required in the Architect's Department, on the temporary staff, for the Essex County Council. Jno. Stuart, F.R.I.B.A., County Architect, Springfield Old Court, Chelmsford.

✱JANUARY 17.—**Wolverhampton.**—Engineering Assistant (temporary) required by the Corporation. H. B. Robinson, M.Inst.M. & Cy.E., Borough Engineer, Town Hall, Wolverhampton.

✱JANUARY 20.—**Leeds.**—Clerk of Works required. The Registrar, The University, Leeds.

JANUARY 31.—**London.**—Full-time Teacher of Carpentry and Joinery, Building Construction and Mathematics required by the Middlesex E.C., at the Willesden Polytechnic Junior Technical School (Building) for Boys, N.W.6. The Principal, Willesden Polytechnic, Priory Park-road, Kilburn, N.W.6.

✱NO DATE.—**Sudan.**—Foreman of Works, age 25 to 32, single preferred, required by the Sudan Government Railways. Advisory Engineer, Sudan Government, London Office, Wellington House, Buckingham Gate, S.W.1, marking envelope "Foreman of Works."

Whitstable and Tankerton Hospital.

Mr. George Browning, builder and contractor, of St. George's-place, Canterbury, was the general contractor for the Whitstable and Tankerton Hospital, which we illustrated in our issue for Dec. 24. We regret that his name should have been inadvertently omitted.

Revival of Rural Industries.

The third report of the Rural Industries Bureau, which has been published lately (price 4d.), covers the 18 months ended on September 30, 1926. The bureau is primarily an advisory body and information bureau. Its method, in general, is to suggest and demonstrate to country workers ways in which they can help themselves; and it acts in co-operation with county organisations. The Bureau's register of country craftsmen, started with the objects named in 1924, now contains the names of approximately 416 individual workers or industries, representing in all about 1,000 full-time and 500 or more part-time workers. They include blacksmiths doing wrought-ironwork, leather workers, hand-weavers, basketry, rush, and raffia workers, furniture-makers, and wood-workers, toy-makers, potters, metal workers and jewellers, embroiderers and needleworkers, book-binders, colour-printers, decorators, stone-carvers, model-makers, and others. An increasing number of inquiries is being received from retail shops, architects, and private individuals desiring to be put in touch with workers on the Bureau's books.

PROPOSED NEW BUILDINGS & OTHER WORKS*.

In these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced. Abbreviations: T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; B.G. for Board of Guardians; B.C. for Borough Council; P.C. for Parish Council; M.H. for Ministry of Health; M.T. for Ministry of Transport; C.B. for County Borough; B.E. for Board of Education; M.A.B. for Metropolitan Asylums Board; and M.W.B. for Metropolitan Water Board.

AUDENSHAW.—The U.D.C. passed plans: Twelve houses, Manchester-road and Hadfield-street, for J. H. Revell.

BALLYCLARE (ANTRIM).—Mr. J. J. Kirkpatrick, of Belfast and Ballyclare, co. Antrim, head of Kirkpatrick Bros., Ltd., has bequested £2,000 to his trustees upon trust to build or purchase small houses at Ballyclare, or in the neighbourhood.

BARNSTAPLE.—The T.C. has decided to erect 32 more houses at Fair View.

BATH.—The T.C. has made application to the M.H. for sanction to borrow £1,600 for alterations to the Swallow-street engine house.—The Council has leased a site for a sub-station at Hampton Hill House, Warminster-road—Application is to be made to the Housing Committee for permission to use a small piece of land near the railway arch in Monksdale-road for the purposes of erecting a sub-station and to the Education Committee for permission to use a piece of land attached to the school at South Twerton for a similar purpose.—The City Engineer has been instructed to report upon an application by the Electricity Committee for permission to erect a sub-station on land adjoining the allotments in Monksdale-road.—Mr. A. J. Taylor has submitted proposals for the extension of the Art Gallery and Libraries, which suggested the taking of the whole of the premises in New Market-row and a portion of the Provision Market and provide accommodation for the City Engineer's Department. The T.C. has agreed to this scheme.—Application is also to be made to the M.H. for sanction to the borrowing of the sum of £5,275, for the adaptation of premises at the Blue Coat School.

BATTLE.—The Housing Committee of the R.D.C. reported the Ministry has granted £6,370 for building houses in the district. The Council has approved the erection of six pairs of houses, two pairs at Sedlescombe, one at Ewhurst, two at Mountfield, and one at Crowhurst.

BIDEFORD.—The T.C. are to build 32 more houses at Handy Cross.

BILLINGHAM.—The U.D.C. are to make application for sanction to loan £94,842 for the erection of 222 houses.—The Public Offices Sub-Committee have inspected various sites between Cowpen Bewley-road and the Belasis-lane housing site, Haverton Hill, and have come to the conclusion that the most suitable and convenient for the erection of Council offices was a site adjoining Belasis-lane, 2½ acres of which they recommended should be acquired.—With reference to school accommodation at Haverton Hill, the Board of Education stated that they had informed the County Education Committee they were prepared to proceed as expeditiously as possible with consideration of the proposal for the enlargement of the Haverton Hill Council School.

BIRMINGHAM.—The purchase of Bingley Hall for £16,000 and of other property on the Easy Hill estate has been recommended by the General Purposes Committee to the City Council. The total amount involved is £32,294.

BOCKING.—The bridge is to be reconstructed and the Essex Highways Committee has estimated the cost at £13,816.

BOLTON.—The T.C. has approved of the following plans: Astley Bridge Cricket Club, for pavilion and tea room, at Thorns-road; J. Kenyon, for two houses, Belmont-road; A. E. Hargreaves, for garage, Chorley New-road; Leigh Bros., for streets and levels, off Ivy-road, and three houses and shops, off Ivy-road; F. C. Porter, for bungalow, Junction-road; Ramsden & Smith, for two houses, Greenmount-lane; Tootal Broadhurst Lee Co., Ltd., for extension to combing room, Adelaide-street; Kay & Co., for roof over yard, Blackhorse-street; R. Entwistle & Co., Ltd., for garage, back Washington-street; Parks Committee, for outbuildings, Leverhulme Park; Watch Committee, for alteration to Police Station, St. Helens-road; Mrs. F. M. Woods, for bungalow, Church-road; W. Andrew, for six houses, Wyresdale-road; J. Archer, for six houses, new Arterial-road, Tootil Bridge; J. Young & Sons for workshop, Haworth-street; and H. Smith, for amended plan of house, Markland Hill.

BRADFORD.—The Watch Committee have appointed a sub-committee to go into the matter of the provision of new police quarters and courts.

BRENTWOOD.—The Essex E.C. are to provide a gallery, &c., at the County High School, at a cost of £700.

BRIDPORT.—The Bridport Cricket, Lawn Tennis, and Bowls Club has outlined the proposed scheme for the construction of a sports field. It is proposed to connect the present field with the one nearest to it on the north side, and to make a splendid field. An up-to-date pavilion is to be erected, hard tennis courts laid down, and a parking place for cars provided. The scheme is to cost about £1,500.

* See also our List of Contracts, Competitions, etc.

BRISTOL.—The M.H. has approved the application of the T.C. for the closing orders on properties at Albion-place, St. Philip's.

BROMLEY.—The T.C. has passed the following plans: H. R. Latter, house, Prospect-place; W. G. Boxall, house, Burnt Ash-lane; J. H. Bloomfield & Son, house and offices, Viscose Factory, Woldham-road; Waring & Nicholson, house, Hayes-lane; H. W. Norris, house. Bourne-road; Ecott, Widgery & Ecott, house, London-lane; T. E. T. Shanks, four houses, Hayes-lane; W. Braxton Sinclair, First Church of Christ Scientist, Widmore-road; D. Deadman, two houses, Burnt Ash-lane; W. Atkinson, two houses, Harwood-avenue Bromley Park Garden Estate; H. Durbin, four houses, Burnt Ash-lane.

BUCKFASTLEIGH.—The U.D.C. has decided to apply to the M.H. for provisional approval for the erection of about 20 non-parlour type houses for the working classes on the Three Corners site.

BURNHAM (ESSEX).—The U.D.C. has approved plans for houses for F. Agate (two), A. Cole (two), J. Halsey, J. H. Jackson, and P. Nicholls.

CALLINGTON.—The Waterworks Co. are to erect a reservoir and a pumping station on 3¼ acres of land at Kelly Bray.

CARDIFF.—The Finance Committee has decided to recommend the Council to sanction application for £19,250 to erect and equip a small-pox hospital at Caerau.—The Finance Committee has approved the expenditure of £40,000 for the immediate completion of the southern and northern half of the Wenallt Reservoir.

CHERTSEY.—The following plans have been approved by the R.D.C.: Two cottages at Moated Farm, Addlestone, for G. Bentley; three cottages at Maybury, for the Sorbo Sponge Products, Ltd.; six houses on the Wey Manor estate, for G. Longden & Son; bungalow at Woodham-lane, for G. L. Montgomery.

CHESTERFIELD.—The Corporation are to interview the architects for housing purposes, with a view to agreeing to a reduced fee for architectural work and supervision on Corporation schemes, and subject to this Rollinson & Son and B. Deeping will be instructed to prepare plans for the erection of 33 "A2" and 67 large "A3" houses on Gloucester-road.—Plans passed: Sports pavilion, off Walton-road, for Robinson's Sports Club; house, Summerfield-road, for F. Wilson.

CROWMARSH.—Plans have been passed by the R.D.C. for six cottages at Warborough, and it was decided to apply for sanction to borrow £3,660.

CROYDON.—The C.B. recommend that application be made to the Electricity Commissioners for sanction to borrow the sum of £650 for the purchase of land for the Drummond-road sub-station.

DAGENHAM.—The Essex E.C. are, at a cost of £100, to reconstruct the offices of the infants' school, at Dagenham Village.

DALBEATTIE.—The T.C. has decided to erect three blocks of houses on sites at Bellevue.

DEWSBURY.—The Finance Committee of the T.C. recommend the Council to apply for sanction to borrow £57,000 required for two housing schemes.

DORKING.—The U.D.C. passed plans: House, for E. C. Cushing, Upper Rose-hill; bungalow, for Brewster, Arnott & Osborne, Deepdene-gardens; two pairs of villas in St. Paul's-road, for G. J. Arthur & Son.

EASTBOURNE.—The T.C. passed plans: Mrs. Lovell and A. J. Stoner, (P. D. Stonham, architect; Underdown, Ltd., builder), North-avenue, a pair of semi-detached houses; T. A. Taylor and H. V. Bartholomew (P. D. Stonham, architect; Underdown, Ltd., builder), North-avenue, a pair of semi-detached houses; F. G. Jonas and J. Tatton (P. D. Stonham, architect; Underdown, Ltd., builder), The Crescent, a pair of semi-detached houses; L. MacLachlan (P. D. Stonham, architect; Underdown, Ltd., builder), Cavalry-crescent, block of three houses; Weller & Seymour, (C. Ford, architect; Weller & Seymour, builders), King's-avenue, two houses and garages; Miss Langmore (F. W. Foster, architect; E. H. Munnion, builder), Summerdown-road, house and garage; S. D. Foulkes (C. Ford, architect; S. D. Foulkes, builder), Woodgate-road, block of three houses; W. Llewellyn (F. C. Benz, architect; W. Llewellyn, builder), St. Philip's-avenue, house; H. Plater and another (P. D. Stonham, architect; Underdown, Ltd., builder), Cavalry-crescent, a pair of semi-detached houses.

EASTLEIGH.—Plans for 56 houses in Stanley-road, for T. W. White, have been approved by the U.D.C.

EDMONTON.—The U.D.C. passed plans: Four houses, Croyland-road, by Lawes, Cherry & Co., Ltd.; two pairs of bungalows, Bush Hill-road, by A. J. Grant; house at "The Orchard," by H. K. Nixon; store buildings at Eley's Factory, Angel-road, by A. Monk.

EGHAM.—Plans passed by the D.C.: H. Atkins, 14 bungalows, Rusham-road, Egham; and seven shops and houses, Station-road, Egham.

FELIXSTOWE.—The U.D.C. passed plans: H. J. Haste, pair of semi-detached houses in St. Andrew's-road; A. & E. Bones, pair of semi-detached houses in Victoria-street; G. Brown, house in Victoria-street; H. J. Linzell, Ltd., house in Cobbold-road.

GUILDFORD.—The Electricity Commissioners have sanctioned the borrowing of £125,000 on account of the cost of the erection of the new electricity generating station in Woodbridge-road.

HAM.—The U.D.C. has passed plans for a bungalow in Kingston-road for Mr. Greenwood, and for three houses in Lock-road, for A. G. Keatch.

HAROLD WOOD.—The Essex E.C. recommend the purchase of a site at £600.

HASTINGS.—The T.C. has decided to commence at once a road improvement scheme, involving an outlay of £31,000, to provide work for the unemployed.

HENDON.—We understand that R. & J. Pritchard are about to erect 120 new shops in the Hendon and Colindale areas. Thirty shops will be erected in Church-road, Hendon, and approximately 100 on the main Edgware-road. The building is in the hands of P. H. Edwards, 237, Golders Green-road.

HESTON AND ISLEWORTH.—The U.D.C. passed plans: Legassick & Wright, two houses, Alexandra-road; Parkwood Development Co., six houses, Woodlane; P. Chase Gardener & Co., two houses, Alexandra-gardens; H. J. Ladley, two houses, Denbigh-road; Roper, Son & Chapman, for three lock-up shops and two flats, Thornbury-road; W. Myring, house, shop and four garages, Inwood-road; W. Myring, lock-up shop and garage, Maswell-park; W. Ferris, two houses, Burlington-road; Roper, Son & Chapman, four shops with living accommodation, Bath-road; P. Chase Gardener & Co., two houses, Alexandra-gardens, and six houses, Sutton-lane; R. T. Warren, bungalow, Springwell-lane; Building Enterprises, Ltd., 30 houses, Spring-grove-crescent; W. Hearn & Chuter, two houses, Wood-lane; P. F. E. Carter, 16 houses, Cranbrook-road; Perry Bros., three shops, Spring-grove-road; R. T. Warren, block of four houses, off Springwell-lane; J. Montgomery, 12 houses, Whitton Dean; P. Chase Gardener & Co., two houses, Twickenham-road; R. Emmett & Son, house, Wellington-road South; Cartwright & Son, 27 houses, Parkside estate; W. Harbrow, 42 houses, Victoria-gardens and Alexandra-gardens; W. Harbrow, 38 houses, Summer-house-avenue and Alexandra-gardens; Perry Bros., three houses, Vicarage Farm-road; C. Scott, shop and house, Kingsley-road; P. Chase Gardener & Co., two shops, Heston-road; P. Watkins, four houses, Great West-road Extension; P. Chase Gardener & Co., open market, Bell-road; H. Allen, 46 houses, Bulstrode-avenue; W. A. Harris, house and shop, Heathdale-avenue.

HORSHAM.—With regard to the provision of a smaller type of house for re-housing purposes in connection with slum clearance, the U.D.C. has instructed the surveyor to submit the outline of a scheme at the next meeting to deal with about 20 houses.

HOWDEN.—The R.D.C. has estimated £36,364 for the widening of the road from Howden to Holme-on-Spalding Moor. This length of road is just over seven miles, and will form an important highway between the two Ridings, on the completion of the Boothferry Bridge. The work is to be carried out by the East Riding County Council.

HULL.—The T.C. passed plans: J. Emmerson, 18 houses, Boothferry-road; H. Spruit, 28 houses, Somme-street, and Aisne-street; E. Mowforth, eight parlour-type houses, Ormonde-avenue; W. Addy, six parlour-type houses, Boothferry-road; J. Wilson, two parlour-type houses, Dundee-street.

KETTERING.—The U.D.C. has passed plans: A. R. Linnett, house, Kingsley-avenue; Kettering Cricket Club, pavilion on their ground; Miss E. Spencer, bungalow, Cromwell-road; Smith Edmunds & Co., four houses, Cornwall-road, and three houses in Clarence-road; E. A. J. Lantsbery, house, Cornwall-road.

LEEDS.—The T.C. has resolved that the Finance and Parliamentary Committee be requested to make application for sanction to the borrowing of £68,172 in respect of the following works: Construction of Middleton reservoir; construction of Tinshill reservoir; construction of Tinshill overhead tank; laying of 20 in. main, Bramley reservoir to Whingate; laying of 12 in. main, Headingley pumping station to Tinshill, &c.—The City Engineer has submitted designs for further type A2 houses and type A2 and A3 cottage flats, and the Council has resolved that the designs be approved, and that the lay-out plans now submitted for the erection of approximately 800 houses on the York and Selby-road housing estate, and 100 type B, 50 type A3 and 48 type A2 houses on the Meanwood housing estate, be approved, subject to the approval of the M.H., that tenders be invited for the erection of the houses, and that the question of applying to the M.H. for sanction to borrow the necessary money for street and sewering works in connection therewith be referred to the Finance and Parliamentary Committee.—The Town Clerk submitted communications from the M.H. as follows: Approving the application for sanction to borrow the necessary money for alterations and extensions at the tuberculosis dispensary, and for arrangements for the provision of electricity for heating and lighting at Killingbeck Sanatorium.—Approximately 1,386 sq. yds. of land on the Meanwood housing estate is to be sold to J. A. Bonner for the erection of three houses and shops thereon, subject to the approval of the M.H.; also 1,511 sq. yds. of land off Stonegate-road, near King-lane, is to be sold to H. Mackenzie Frazer, for purposes in connection with housing, subject to the approval of the M.H.—The Council has also resolved that the plans now submitted by H. S. Chorley, architect, for an extension of the depot in Swinegate, at the estimated cost of £122,500, including architect's fees, be approved, and that the question of applying to the M.T. for sanction to borrow the sum of £137,500 for building and equipment be referred to the Finance and Parliamentary Committee.—800 sq. yds. of land situate off York-road is to be sold to E. S. Rogers for the erection of two dwelling-houses thereon.—Arrangements have been made with G. W. Atkinson, architect appointed for the erection of new workshops, &c., at the junction of New York-road and Bridge-street, to proceed with the preparation of the necessary plans.—Tenders are to be obtained for the annual cleaning and painting of police and fire brigade premises.—The General Manager of the Tramways Committee has reported as to the provision of tram shelters, and instructions have been given for designs and estimates of cost to be submitted.—Tenders are to be obtained for the provision of a reinforced concrete roof for the storage reservoir at Bramhope.—Application is to be made to the M.H. for sanction to borrow £80,000 for the erection of 160 more houses on the Wyther housing estate.—The M.H. has sanctioned the borrowing of £1,420 for the erection of a fence at West Leeds High School.—The T.C. has resolved that two shop sites situate in Station-road on the Cross Gates housing estate, containing an approximate area of 382 sq. yds., be sold to H. Hick, subject to the approval of the M.H.—The Council state that they have no objection to the proposal from the Meanwood Estate Tenants' Association to erect a central hall on the estate.

LUTON.—The R.D.C. has passed plans for 12 houses, Luton-road. Houghton Regis; a bungalow and village hall, Whipsnade; three bungalows, Houghton Regis; tea room, Dunstable Downs; two houses, Montrose-avenue.

MALDON AND MERTON.—The Wimbledon Electricty Department have made application to the U.D.C. for permission to build a sub-station on the site between 7 and 9, Martin Way.

MANCHESTER.—The Corporation has purchased ten acres of land for the North Manchester Municipal School for Boys at Chain Bar, Moston. The cost of the erection of the school, which is for 500 places, will be £60,000.

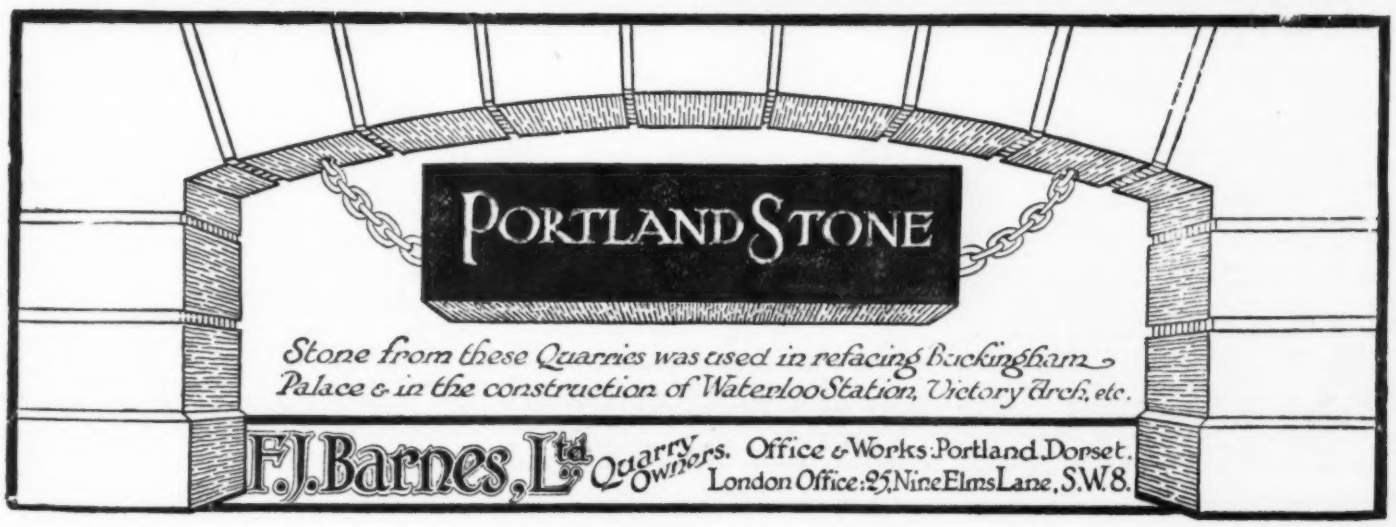
MANSFIELD.—The T.C. have approved the following plans: Mansfield and District Miners' Welfare Committee, reading room, covered-way and extra lavatory accommodation at Berry Hill Hall; G. Day, house, Sutton-road; J. Wainman, storeroom, Midworth-street; Welbeck Estates Co., Ltd., cartshed, Sutton-road; the Trustees of Mansfield St. Peter's, latrine accommodation, St. Peter's School, Church-lane; the Standard Co., Ltd., engine shed and store, Ratcliffe-gate; A. Farnsworth, two houses, Southwell-road; Mansfield Brewery Co., Ltd., additions to "Reindeer Inn," Southwell-road, and for proposed alterations to a shop on the south-west side of West Gate, for A. E. Gee.

MERROW.—Work will shortly be commenced on the laying out of a large housing estate at Merrow. Recently negotiations have taken place between C. A. Burlingham, architect, and the trustees of the Hospital of the Blessed Trinity, Guildford, and as a result the former has acquired, at a figure exceeding £13,000, large areas of land on the south side of the main Guildford-Leatherhead-road, and on either side of Trodd's-lane. This land was part of Hall Place Farm, the property of the Hospital, and it is the intention of Mr. Burlingham to erect houses of a country residential character.

MIDDLESBROUGH.—W. S. Gibson is erecting a picture theatre to seat 900 persons on the edge of the Martongrove building estate.

MOLESEY.—The M.H. is to hold an inquiry into the application of the Molesey District Council to acquire compulsorily land at Green-lane, West Molesey, for the purposes of a housing scheme.

NEWTON ABBOTT.—The U.D.C. has approved the following plans: Bungalow, Higher Gabwell, Stoke, for E. Andrews; bungalow, Kingsteignton, for C. Boucher.


PORTLAND STONE
Stone from these Quarries was used in refacing Buckingham Palace & in the construction of Waterloo Station, Victory Arch, etc.
F.J. Barnes, Ltd. Quarry Owners. Office & Works: Portland, Dorset.
London Office: 25, Nine Elms Lane, S.W.8.

NEW THUNDERSLEY.—The Essex E.C. are to purchase a site at £270.

NORTHAMPTON.—The C.B. recommend that the Council do approve an additional expenditure of £1,100 by the Northamptonshire (Town and County) Association for the Blind for the adaptation and improvement of the workshops in Gray-street. The Council resolved to recommend that application be made to the M.H. for sanction to borrow £550 for the work.—The Borough Engineer has reported that about 240 houses required slight external and the majority internal repairs, and the Council resolved that tenders be invited for the work.—It has been resolved to recommend that alterations be made to the horse repository at the Cattle Market, as indicated on the Plans submitted by the Borough Engineer, at a cost of £400, and tenders invited for carrying out the work.—plans passed: House, Chestnut-road, — Jordans; two houses, Lime-avenue, Stafford & Agutter; 14 lock-up garages, 38, Grafton-street, H. Westley; four houses, The Crescent, C. H. Rainbow; loading warehouse, Lea-road, J. Sears & Co., Ltd.; two houses, St. George's-avenue, A. P. Hawtin & Sons, Ltd.; 20 houses, Loyd-road, Northampton Co-operative Society, Ltd.; house, Woodland-avenue, H. E. Dickenson; house, Clarence-avenue, H. Holloway.

NORTHOLT.—A plan has been submitted to the Council for the lay-out of an estate off Northolt-road, adjoining Parker's Farm, by Dawson & Baker, partly in the Uxbridge Rural District and partly in Harrow. The whole was included in the Harrow Town-Planning Scheme, and in the area being applied for to be transferred to this district. The Council has agreed to the recommendations of the Surveyors' Committee (1) approving the lay-out of the estate under the Town-Planning Scheme Interim Development Order; (2) to inform Messrs. Dawson & Baker that they must submit plans of that portion which is in the Northolt parish to the Uxbridge Rural District Council for approval.

NOTTINGHAM.—The Housing Committee of the T.C. have passed a suggestion in connection with the clearance of the Red Lion-street area and the New-road (Parliament-street to London-road), that, after rehousing dispossessed people at the Cardale-road site, there will be available a portion of land for the erection of 80 houses, and that the "principle of the erection of 80 houses" there should be accepted, with a report later as to their estimated cost.

ODSAL.—The Bradford Corporation propose to erect further houses upon the Odsal site and 48 more at Scholemoor.

PENARTH.—The U.D.C. passed plans: Barclay's Bank, Ltd., bank premises, Market-square; Cumberland C.C., office and depot, Norfolk-road.

PREESALL.—The U.D.C. has received sanction from the M.H. for 20 houses at Knott End.

PRESTON.—The sub-committee of the Preston E.C. has received sanction from the M.H. to the borrowing of £21,977 for the erecting of the proposed Deepdale-road Central Council School.

REDCAR.—The North Riding C.C. is making application to the M.H. for permission to borrow £1,050 for the erection of a special subjects block at the Redcar James Mackinlay Council Central School.

REIGATE.—The T.C. passed plans: L. E. Williams, house at Gatton Point, Redhill, for Mrs. F. Boldero; P. J. Wetton, house at South Park, Reigate, for Miss A. M. Winter; W. Farmer, pair of houses in Althorne-road, Redhill, for C. D. Wellicome; V. Hooper, house, Waterlow-road, High Trees estate, for Hayden & Randall; and cottage, rear of Old Barn, London-road, Redhill, for W. Lees Stenning.

ROTHERHAM.—The Corporation are proposing a scheme for the erection of 200 houses in the Meadow Bank district.

ROTHWELL (YORKS).—The U.D.C. are seeking to acquire land at The Pastures for the purpose of constructing new open-air swimming baths.

RUGBY.—The R.D.C. has decided to build thirty-two more houses at Croop Hill, New Bilton, four at Stretton-on-Dunsmore, and eight at Marton.

ST. ASAPH.—The R.D.C. has passed plans: Three pairs of semi-detached houses in Princes-road, Rhuddlan, for T. H. Roberts; three pairs of semi-detached houses in Shore-road, Meliden, for T. E. Jones; bungalow, on the Brynhedydd estate, Rhuddlan, for H. A. Scott; two pairs of semi-detached houses on the Merllyn estate, Rhuddlan, for E. H. Weaver.

ST. HELENS.—The T.C. passed plans: Eight houses, 113-127, Doulton-street, J. B. Williams; four houses, 142-144, New-street and two adjacent houses along Intended street, R. Heward; two houses, Prescot-road (corner of Margery-street), R. Garner and another; two bungalows, Hoghton-road, Miss E. Walsh; four houses, Beaconsfield-road, Ainge, Butterworth, Barlow & Scott; 14 houses, 126-152, Doulton-street, J. B. Williams; eight houses, Bishop-road, I. Griffiths; six houses, 2-12, Moorfield-road, Jos. Vose; two houses Haresfinch-road, United Building Co.; eight houses, Ainsworth-road, Greenough Bros.

SHEFFIELD.—The plans are now completed for the erection of the proposed new extended fire station on the site at Rockingham-street and Division-street, at an estimated cost of £30,000.—The Plans Committee will shortly have before them the new scheme drawn up by the Provincial Cinematograph Theatres, Ltd., for their cinema in Barker's Pool. A residence for the manager will be erected on the site, and there will be a large domed roof. There will be also additional seating accommodation.—A picture palace to accommodate 1,500 persons is to be built on the Manor Estate, at the corner of City Ridgeway and Prince of Wales roads.—The T.C. has passed plans: Two houses, Pingle-road, for T. H. Bailey; six houses, Dalewood-road, for A. J. Belton; six houses, Little Norton-lane, for J. H. Dyson; six houses, Hackthorne-road, for S. Hogg; two houses, School Green-lane, for G. M. Taylor; two houses, Forres-street, for L. Green and J. N. Padley; two houses, Reservoir-road, for H. Hawley; two bungalows, Hunters'-lane, Intake, for J. L. Hamstock; two houses, Cairns-road, for Spooner & Harrison; six houses, Greystones-road and Bingham Park-road, for W. Malthouse, Ltd.; two houses, Tapton-bank, for L. J. Samuel; bungalow, Talmont-road, for E. Wright; house, High Storrs-road, for G. C. Glossop; six houses, Norton Lees-road, for W. C. Mander; house and garage, Knowle-lane, for Mr. Benson; house, Herries-road, for A. Hornfield; house, Herries-road, for Dr. F. S. Hardy; three houses, Folds-lane, for J. V. Auckland; two houses, Cartmell-road, for J. Enock; house, High Storrs-road, for G. C. Glossop; bungalow, Talmont-road, for E. Wright; two houses, Charles Ashmore-road, for G. R. Parkin; 10 houses, Charles Ashmore-road, for J. H. Dyson; six houses, Norton Lees-road, for W. C. Mander; four houses, Struan-road, for Plant Bros.; four houses, Chesterfield-road, for C. Leadbeater; 26 houses, Huntley-road, for J. Ramsden; six houses, Muskoka-drive, for G. M. Taylor; six houses, Bingham Park-road and Greystones Hall-road, for Wm. Malthouse, Ltd.; two houses, Smithywood-crescent, for J. J. Hawksworth; two houses, Holyoake-avenue, for S. Sanderson; two houses, Arbourthorne-road, for Mason & Robinson; six houses, Crawford-road, for T. Leadbeater; two houses, Ford-road and Dobbin Hill, for F. Bush; four houses, Mansfield-road, for W. Croft; six houses, Patmore-road, for T. Pye; house, shops, and store, Fairway, Manor estate, for G. H. Needham; three houses, Folds-lane, for J. V. Auckland; house and garage, Pingle-road, for G. H. Bodell; bungalow, Abbey-lane, for A. Tate; house, Police Station, and garage, Hammerton-road, Dodd-street and Trickett-road, for the Watch Committee of the Sheffield City Council; two bungalows, Dalewood-road, for J. March; two houses, Brooklands-avenue, for I. R. Dixon and Mrs. E. Wardingley; six houses, Brooklands-crescent, for L. W. Pye; six houses, Laird-road, for T. Pye; two houses, shops, and six garages, Ecclesall-road South, for W. Ramsay; six houses, Dalewood-road, for Smith & Hawley; 10 houses, Dalewood-road, for A. J. Belton; house, shop and stores, Middlewood-road, for G. E. Smith; four houses, Moorcroft-road, for J. J. Boyd.

SHEPPERTON.—The Staines R.D.C. has approved a scheme for the erection of 20 houses.

SOUTHAMPTON.—The Co-operative Society has purchased a block of premises in St. Mary's-road, together with six cottages, which is to be developed into a large emporium.

SOUTHPORT.—A new Labour Exchange is to be erected and plans have been passed for new premises to be erected in Princes-street, and tenders for the building are now under consideration.

SOUTH SHIELDS.—It is intended to start a scheme for building a new church in the parish of St. Francis, South Shields, on the south bank of the Tyne, near the entrance to Tyne Dock. The vicar, the Rev. F. H. Warner, would welcome any help from outside the parish.—The Borough Engineer has laid before the T.C. an estate plan submitted by T. A. Page & Son, architects, for A. Holmes & Co., for proposed lay-out of 44 building sites, on land belonging to the Ecclesiastical Commissioners for England, bounded on the west by Mortimer-road, on the east by land abutting King George-road, and on the north and south by proposed 24 ft. roads, designated Page-avenue and Stanton-avenue, respectively. The Council has approved the plan.—Plans passed: F. W. Newby, for Henderson Bros., 24 semi-detached houses on land between Harton-lane and Mortimer-road, viz., Grasmere-gardens, Ambleside-avenue, Windermere-crescent, and Buttermere-gardens; H. Hill, for Jacob Reay and J. Strother, two semi-detached bungalows, Armstrong-avenue, Harton Hall estate.

SPALDING.—The R.D.C. has decided to accept the offer of four acres of land, at £85 per acre, on a local estate, for housing purposes.

THE "HENDERSON" SYSTEM

SLIDING DOOR GEAR

FOR FACTORIES, GARAGES, SCHOOLS, ETC.,

"TANGENT JUNIOR" FOR LIGHT DOORS.
"TANGENT SENIOR" FOR HEAVY DOORS.

WRITE FOR BOUND CATALOGUE B.24 TO:-

P.C. HENDERSON, LIMITED,

BARKING, ESSEX.. PHONE: GRANGEWOOD 0247

SWAFFHAM.—Application is to be made to the M.H. by the U.D.C. for the erection of 14 houses on the Sporle-road housing site, and for the borrowing of £6,500 for the scheme.

THORNHILL.—Messrs. James Austin & Sons (Dewsbury), Ltd., have purchased the Thornhill Forge estate, upon which to erect new and modern buildings.

TILBURY.—The Essex E.C. recommend the erection of new buildings at St. Chads, at a cost of £13,520.

TONBRIDGE.—The R.D.C. has accepted tenders for the erection of 10 houses at Hadlow, 10 at Pembury, six at Petteridge, and six at Hildenborough.

TOTNES.—The R.D.C. has decided to submit a scheme to the Ministry for 32 houses—Marldon, 12; Ugborough, 2; Churston, 8; Dittisham, 4; Holnes, 4; Brent, 2.

TRAWDEN.—The U.D.C. are to apply to the M.H. for sanction to their proposal to erect 24 houses on land at Skipton-road.

TYNEMOUTH.—The T.C. has approved a conditional recommendation for application for sanction to borrow £54,000 for the conversion of pail-closets to the water carriage system.

WALTHAMSTOW.—The Essex Housing Committee are to provide heating apparatus at the tuberculosis pavilion, at a cost of £158.

WARRINGTON.—The T.C. propose to erect a further 10 houses on the Reynolds estate and 156 houses on the Bewsey estate.—Funds are being raised by St. Barnabas' parishioners for the proposed erection of a church hall, estimated to cost £2,500.

WARWICK.—The R.D.C. has received a letter from a Coventry architect stating that a client of his contemplated building 182 houses on the Whoberley estate, and as the present subsidy ends next October, he asked if the Council would apply to the Ministry of Health to grant subsidies for those houses. The architect said he hoped to send in plans for 35 of the houses for the next meeting of the Council. The Council expressed themselves as favourable to the proposal, and as there is other prospective house building in the district, it was decided that the Council apply for the granting of subsidies for 250 houses.—Plans passed: Six houses, Grove-avenue, for R. W. Messenger; 10 houses, Woodside-avenue, Green-lane estate, for T. Bates & Son; two houses, Lime-street-avenue, for Mr. Bayliss.

WEST HARTLEPOOL.—The T.C. passed plans: J. T. Atkinson & Son, new warehouse, sheds, cells, &c., on land rear of Baltic-street; S. Handley, house, Elwick-road; C. R. Kindberg, house, Eldon-grove; Mrs. Richardson, semi-detached house, Station-lane, Seaton Carew; J. G. Atkinson, two bungalows, Oakland-avenue; C. Turnbull, six pairs of semi-detached houses, Fernwood-avenue.

WILLESDEN.—The M.H. has agreed to the raising of a loan of £20,351 for the erection of a small-pox hospital at Kingsbury.—The Council recommend that the officers be authorised to re-submit to the M.H. the Council's proposals for the erection of flats on the baths site, Stafford-road, Kilburn, with a view to co-operating with the Willesden Housing Society in the reconditioning of houses in overcrowded areas in Kilburn.—The Engineer has submitted a plan and estimate for the erection of a two-storied convenience on the south side of the flight of steps adjoining Kensal Rise Station, with an entrance for women from the steps from Chamberlayne-road, and for men from Station-road, and the Council has now instructed him to obtain tenders for the building.—Plans passed: Six houses, four in Aylesbury-street and two in Verney-street, Neasden, for The Metropolitan Railway Co.; eight houses, Neasden-lane, Neasden, for F. Cattran; shop with two flats over, 53 and 55, The Broadway, Cricklewood, by W. N. Lewis, for Mr. Downham; four houses, 116, 118, 120 and 122, Furness-road, Harlesden, for E. W. Jermey; preliminary plan of building line for five shops, Neasden-lane, Neasden, for F. Cattram; four houses, Donnington-road, Willesden, by J. A. Burrell, for A. L. Tolcher; house, 23, Homestead-park, Dollis Hill-lane, for W. E. Sanders; house, Deerhurst-road, Cricklewood, for C. W. B. Simmonds, Ltd.; four houses, Mount Pleasant-road, Brondesbury, for C. W. B. Simmonds, Ltd.; five houses, 101, 103, 105, 107, and 109, Brondesbury-park, by F. Stanley Allen, for Western & Arnell.

WOLVERHAMPTON.—A proposal to erect temporary accommodation for 250 children at a cost of £1,5 0, and simultaneously to proceed with a permanent block of school buildings to accommodate 400 children, at a cost of £15,000, at Low Hill Housing estate, Bushbury, has been adopted by the E.C.

WORCESTER.—The City Council has made application to the M.H. for sanction to borrow £8,775 for improvements to the Cattle Market.

WYKE.—The Bradford Corporation are to erect 350 houses on the Shirley Manor estate by direct labour, at an estimated cost of £177,000.

YORK.—The T.C. passed plans: W. E. Puckering, two houses, Carrington-avenue; A. Temple, house, Emerald-street; A. Temple, new lay-out, Lindley-street and Murray-street; J. Allison & Sons, amended plan of bungalow, Barmby-avenue; H. Leetham & Sons, Ltd., warehouse, Walmgate; W. Johnson, house, Finsbury-street.

FIRES.

COLCHESTER.—Culver-street Wesleyan Church has been completely destroyed by fire. Only the bare walls remain standing, and the damage is reported to be in the neighbourhood of £15,000.

LEICESTER.—By a fire which occurred at the premises of W. H. Smith & Sons, Campbell-street, Leicester, damage has been estimated at from £10,000 to £15,000.

LEISTON (SUFFOLK).—Leiston Hall, situate within twenty yards of the parish church, Leiston, Suffolk, has almost entirely been destroyed by fire.

MANCHESTER.—Damage estimated at between £25,000 and £30,000 has been caused by a fire which broke out at the Winter Gardens Cinema, Peter-street.

TONBRIDGE.—The Public Hall Cinema, High-street, Tonbridge, has been practically destroyed by fire. The cinema forms part of the Public Hall building and the total damage done is estimated at nearly £10,000.

PRICES CURRENT OF MATERIALS

[Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry.—Ed.]

BRICKS, &c.

Per 1,000 Alongside, in River Thames up to London Bridge.

	£ s. d.
Best Stocks	4 5 6
Second Hard Stocks	3 19 6

Per 1,000. Delivered at London Goods Stations.

	£ s. d.		£ s. d.
Flettons, at King's Cross	2 13 3	Best Blue Pressed Staffs	9 5 0
Do. grooved for Plaster	2 15 3	Do. Bullnose	9 15 0
Do. Bullnose	3 8 3	Blue Wire Cuts	7 5 0

Best Stourbridge Fire Brick:—

2½ in.	8 11 0	3 in.	10 3 0

GLAZED BRICKS—

Best White Ivory, and Salt Glazed Stretchers	23 0 0	D'ble Str'tch'rs	31 10 0
		D'ble Headers	28 10 0
		One Side and two ends	32 10 0
Headers	22 10 0	Two Sides and one End	33 10 0
Quoins, Bullnose and 4½in. Flats	29 10 0	Splays and Squints	31 0 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours, Hard Glaze, £5 10s. extra over white.

BREEZE CONCRETE SLABS.

Delivered London.

	s. d.		s. d.
2 in. per yd. super	1 11	3 in. per yd. super	2 9
2½ in. " "	2 4	4 in. " "	3 6

	s. d.		
Thames Ballast	10 6	per yd.	delivered 2 miles radius Paddington.
Pit Sand	13 9	" "	
Thames Sand	14 6	" "	
Best Washed Sand	14 6	" "	
¾ in. Shingle for Ferro-Concrete	12 9	" "	
¾ in. "	14 0	" "	
¾ in. Broken Brick	11 6	" "	
Pan Breeze	7 6	" "	

Per ton delivered in London area in full van loads.

Best Portland Cement. British Standard Specification. Test £2 18 0 to £3 3 6

51s. alongside at Vauxhall in 80-ton lots.

Ferrocrete per ton extra on above	0 10 0
Super Cement (Waterproof)	4 8 0
Roman Cement	8 15 0
Parian Cement	5 15 0
Keene's Cement, White	5 15 0
" Pink	5 10 0
Plaster, Coarse, Pink	3 0 0
" " White	3 12 6
" Fine	5 12 0
Sirapite, Coarse	3 9 0
" Finish	3 17 0
Grey Stone Lime	3 0 9
Chalk Lime	3 0 9
Best Ground Blue Lias Lime	2 13 6
Hair per cwt.	2 2 6
Granite Chippings	1 12 0

NOTE.—Sacks are charged 1s. 9d. each and credited 1s. 6d. if returned in good condition within three months carr. pd.

Stourbridge Fireclay in s'cks 37s. 0d. per ton at rly. dp.

STONE.

BATH STONE—delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube — s. d. 2 9½

Do. do. delivered in railway trucks at Nine Elms, L. & S.W.R., per ft. cube — 2 11½

PORTLAND STONE—

Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, L. & S.W.R., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube — 4 4

Do. do delivered on road wagons at above stations, per ft. cube — 4 5

White basebed, 3d. per ft. cube extra.

NOTE.—1d. per ft. cube extra for every foot over 20 ft. *average*, and ½d. beyond 30 ft.

HOPTON-WOOD STONE—

	s. d.
Delivered at any Goods Station, London.	
Random blocks from 10 ft. and over P. ft. cb.	17 0
Sawn two sides "	27 0
Sawn three or four sides "	32 0

YORK STONE, BLUE—*Robin Hood Quality.*

Delivered at any Goods Station, London.		
6 in. sawn two sides landings to sizes (under 30 ft. super.)	Per ft. super	5 6
6 in. rubbed two sides, ditto	"	6 0
3 in. sawn two sides slabs (random sizes)	"	2 3½
2 in. to 2½ in. sawn one side slabs (random sizes)	"	1 6½
1¼ in. to 2 in. ditto, ditto	"	1 4

HARD YORK—

Delivered at any Goods Station, London.		
Scappled random blocks	Per ft. cube	6 3
6 in. sawn two sides landing to sizes (under 40 ft. super)	Per ft. super	5 1½
6 in. rubbed two sides, ditto	"	6 1½
4 in. sawn two sides slabs (random sizes)	"	2 10
3 in. ditto ditto	"	2 1½
2 in. self-faced random flags	Per yd. super	9 0

CAST STONE.

Delivered in London Area in full van loads, per ft. cube:—Plain, 8s. 6d.; Moulded, 9s. 6d Cills, 10s. 0d.

WOOD.

GOOD BUILDING DEAL.

Inches.	per stan.	Inches.	per stan.
4 × 11	£28 0	3 × 6	£21 0
4 × 9	25 0	3 × 11	25 0
4 × 8	24 0	2 × 11	25 0
4 × 7	23 0	3 × 9	24 0
3 × 8	21 0	2½ × 9	23 0
3 × 7	20 0	3 × 4½	22 0
2½ × 7	20 0	3 × 4	22 0

PLANED BOARDS.

1 × 11	£27 0	1 × 9	£26 0

PLAIN EDGE FLOORING.

Inches.	per sq.	Inches.	per sq.
¾	20/-	1¼	31/-
1	22/-	1½	34/-
1¼	25/-		

TONGUED AND GROOVED FLOORING.

Inches.	per sq.	Inches.	per sq.
1	25/-	¾	16/6
1¼	31/-	¾	19/-
1½	34/-	1	24/-

Inches.	BATTENS.	s. d.
¾ × 2		2 6 per 100 ft.

SAWN LATHS.

Per bundle	0 2 6

1" AND UP THICK.

	£ s. d.	£ s. d.
Dry Austrian Wainscoat, per ft. cube	0 16 0 to	0 18 0
Dry American and /or Japanese Figured Oak, ft. cube	0 15 0 to	—
Dry American and/or Japanese Plain Oak, ft. cube	0 11 0 to	0 13 0
Dry sq. edged Honduras Mahogany, ft. cube	0 16 0 to	0 18 0
Dry Log cut Honduras Mahogany, ft. cube	0 18 0 to	1 1 0
Dry Cuba Mahogany, ft. cube	1 4 0 to	1 10 0
Dry Teak, ft. cube	0 13 0 to	0 15 0
Dry American Whitewood, ft. cube	0 11 0 to	0 14 0
Best Scotch glue, per cwt.	4 10 0 to	—
Liquid Glue, per cwt.	4 7 0 to	5 10 0

SLATES.

First quality slates from Bangor or Portmadoc carriage paid in full truck loads to London Rate Station. Per 1,000.

	£ s. d.		£ s. d.
24 by 12	32 18 4	18 by 10	18 12 11
22 by 12	29 17 11	18 by 9	16 9 2
22 by 11	27 14 2	16 by 10	15 12 6
20 by 12	26 5 0	16 by 8	12 3 9
20 by 10	22 10 0		

TILES.

Delivered at London rate stations in full truckloads of not less than 4 tons. Per 1,000 f.o.r. London.

	£ s. d.
Best machine-made tiles from Broseley or Staffordshire district	5 12 6
Ditto hand-made ditto	5 17 6
Ornamental ditto	6 2 6
Hip and valley tiles (per dozen) Hand-made	0 9 6
Machine-made	0 9 0

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION, PER TON—

	£ s. d.
R.S. Joists, cut and fitted	12 10 0
Plain Compound Girders	14 10 0
Stanchions	16 10 0
In Roof Work " "	19 10 0

MILD STEEL ROUNDS.

To London Station, per ton.

Diameter.	£ s. d.	Diameter.	£ s. d.
¼ in.	12 0 0	⅜ in. to ½ in.	10 15 0
⅛ in.	11 0 0	⅝ in. to 2½ in.	10 10 0

WROUGHT-IRON TUBES AND FITTINGS—

(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward if sent from London Stocks.)

	Tubes.	Fittings.	Flanges.
Black Gas	60 %	50 %	60 %
Galvanised Gas	45 %	40 %	50 %
Blue Water	55 %	45 %	55 %
Galvanised Water	38½ %	35 %	45 %
Red Steam	50 %	40 %	50 %
Galvanised Steam	32½ %	30 %	40 %

C.I. HALF-ROUND GUTTERS—London Prices, ex Works.

Per yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
3 in.	1/3½	11½d	3½d.
3½ in.	1/4½	1/1½	3½d.
4 in.	1/6	1/3	3½d.
4½ in.	1/7½	1/4½	4½d.
5 in.	1/10½	1/6½	5½d.

O.G. GUTTERS.

3 in.	1/8	1/4½	3½d.
3½ in.	1/8	1/4½	3½d.
4 in.	1/9½	1/4½	3½d.
4½ in.	1/11½	1/7½	4½d.
5 in.	2/4½	1/10½	5½d.

RAIN-WATER PIPES, &c.

Per yd. in 6 fts.	Pipe.	Bends, stock angles.	Branches, stock angles.
2 in. plain	1/10½	1/3	1/9½
2½ in. "	2/0½	1/4½	2/1½
3 in. "	2/6	1/9	2/7½
3½ in. "	2/11½	2/0½	3/0½
4 in. "	3/5	2/6½	3/8½

L.C.C. COATED SOIL PIPES—London Prices, ex Works.

	Pipe.	Bends, stock angles.	Branches, stock angles.
	s. d.	s. d.	s. d.
2 in. per yd. in 6fts. plain	3 3	2 4½	2 10
2½ in. "	3 9	2 7½	3 7
3 in. "	4 6	2 10	4 2½
3½ in. "	4 11½	3 7	4 11½
4 in. "	5 5½	4 0½	5 9

L.C.C. COATED DRAIN PIPES—London Prices ex Works.

	Pipe.	Bends, stock angles.	Branches, stock angles.
	s. d.	s. d.	s. d.
3 in. per yd. in 9ft. lengths	4 4	5 1	8 0½
4 in. " "	6 2	5 8	10 0
5 in. " "	7 2	10 10	17 1
6 in. " "	8 6	13 2	21 9

Gasken for jointing, 38/6 per cwt.

Per ton in London.

IRON—	£ s. d.		£ s. d.
Common Bars	13 0 0	to	14 10 0
Staffordshire Crown Bars—good merchant quality	14 5 0	"	15 5 0
Staffordshire Marked Bars	16 5 0	"	17 5 0
Mild Steel Bars	10 0 0	"	11 0 0
Steel Bars, Ferro-Concrete quality, basis price	10 0 0	"	11 0
Hoop iron, basis price	12 0 0	"	13 0 0
" Galvanised	27 0 0	"	28 0 0
Soft Steel Sheets, Black—Ordinary sizes to 20 g.	13 5 0	"	14 5 0
" " 24 g.	14 5 0	"	15 5 0
" " 26 g.	16 5 0	"	17 5 0
Sheets Flat Best Soft Steel, C.R. & C.A. quality—Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15 10 0	"	16 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	16 10 0	"	17 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g.	18 10 0	"	20 10 0

No. 1 quality £4 per ton extra.

Flat and Galvanised Corrugated Sheets—Ordinary sizes, 6 ft. to 9 ft. to 20 g.	18 10 0	"	19 10 0
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g.	19 0 0	"	20 0 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	22 0 0	"	23 0 0
Sheets Galvanised Flat, Best quality—Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	22 0 0	"	23 0 0
Best Soft Steel Sheets, 22 g. and 24 g.	24 0 0	"	26 0 0
Best Soft Steel Sheets, 26 g.	25 10 0	"	26 10 0
Cut Nails, 3 in. to 6 in.	19 0 0	"	20 0 0

(Under 3 in. usual trade extras.)

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

LEAD, &c.

(Delivered in London.)

	£ s. d.
LEAD—Sheet, English, 4 lb. and up	39 10 0
Pipe in coils	41 0 0
Soil Pipe	43 0 0
Compo Pipe	44 0 0

NOTE—Country delivery, 30s. per ton extra; lots under 3 cwt., 3s. per cwt. extra, and over 3 cwt. and under 5 cwt., 1s. 6d. per cwt. extra. Cut to sizes 2s. cwt. extra.

Old lead, ex London area, at Mills per ton	27 10 0	—
Do., ex country, carriage forward per ton	28 10 0	—

COPPER.

	s. d.
Seamless Copper tubes (basis) per lb.	1 1
Strong sheet "	1 1
Thin "	1 1
Copper nails "	1 3
Copper wire "	1 4

PLUMBERS' BRASS WORK.

Delivered in London.

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
29/-	45/-	76/-	153 -	246 -	510/- per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
41/6	62/-	92/-	174/-	300/-	588/- per doz.

NEW RIVER PATTERN SCREW DOWN MAIN FERRULES.

½ in.	¾ in.	1 in.
39/6	60/-	116/6 per doz.

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
7/6	10/-	14/-	23/-	30/-	42/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
7/6	11/-	17/-	29/-	36/-	63/- per doz.

BRASS SLEEVES.

1¼ in.	2 in.	3 in.	3½ in.	4 in.
10/-	12/-	20/-	24/-	31/- per doz.

NEW RIVER PATTERN CROYDON BALL VALVES, S.F.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.
35/-	56/-	98/-	162/-	228/- per doz.

DRAWN LEAD P. & S. TRAPS WITH BRASS CLEANING SCREW.

1¼ in.	1½ in.	2 in.	3 in.
8 lbs. P. traps	33/-	41/-	56/-	101/- per doz.
8 lbs. S. traps	35/-	45/-	66/-	126/- "

TIN—English Ingots, 2/10 per lb. SOLDER—Plumbers 1/3, Tinmen's 1/6, Blowpipe 1/7 per lb.

PAINTS, &c.

		£ s. d.
Raw Linseed Oil,	in pipes per gallon	0 3 0
" " "	in barrels "	0 3 1
" " "	in drums "	0 3 3
Boiled " "	in barrels "	0 3 3
" " "	in drums "	0 3 6
Turpentine	in barrels "	0 5 0
"	in drums (10 gall.) "	0 5 2
Genuine Ground English White Lead, per ton (In not less than 5 cwt. casks.)		50 15 0

GENUINE WHITE LEAD PAINT—"Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Morganswyte," "Polacco," "[illegible]" Brand and other best brands (in 14 lb. tins) not less than 5 cwt. lots per ton delivered 70 5 0

Red Lead, Dry (packages extra)	per ton	42 0 0
Best Linseed Oil Putty	per cwt.	0 15 0
Filocol	"	0 15 6
Size. XD Quality	firkin	0 3 6

Continued on next page

*The information given on this page has been specially compiled for THE BUILDER and is copyright. Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS (*contd.*).

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

	Per ft.		Per ft.
15 oz. fourths ..	3½d.	22 oz. fourths	7½d.
15 „ thirds	4½d.	32 „ thirds	9½d.
21 „ fourths ..	4½d.	Obscured Sheet, 15 oz.	3½d.
21 „ thirds	5½d.	„ 21 „	5½d.
26 „ fourths ..	5d.	Fluted 15 oz. 6½d., 21 oz.	9½d.
26 „ thirds	7½d.	En'lled 15 oz. 5½d., 21 oz.	7½d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft
¼ Rolled plate	4½d.
⅜ Rough rolled	5½d.
½ Rough rolled	6d.
Figured Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish White..	6½d.
Ditto, tinted	9½d.
Rolled Sheet	6½d.
White Rolled Cathedral	6½d.
Tinted Do.	8½d.

Cast Plate is same price as rough rolled.

VARNISHES, &c.

		Per Gallon. £ s. d.
Oak Varnish	Outside	0 14 0
Fine ditto	ditto	0 16 0
Fine Copal	ditto	0 18 0
Pale Copal	ditto	1 0 0
Pale Copal Carriage	ditto	1 4 0
Best ditto	ditto	1 12 0
Floor Varnish	Inside	0 18 0
Fine Pale Paper	ditto	0 18 0
Fine Copal Cabinet	ditto	1 2 6
Fine Copal Flatting	ditto	1 0 6
Hard Drying Oak	ditto	0 18 0
Fine Hard Drying Oak	ditto	0 19 0
Fine Copal Varnish	ditto	1 0 0
Pale ditto	ditto	1 2 0
Best ditto	ditto	1 12 0
Best Japan Gold Size		0 12 0
Best Black Japan		0 10 6
Oak and Mahogany Stain (water)		0 12 0
Brunswick Black		0 7 0
Berlin Black		0 14 6
Knotting (patent)		1 5 0
French and Brush Polish		0 17 0
Liquid Dryers in Terebine		0 9 0
Cutrass Black Enamel		0 7 0

National Association of Clayworks' Managers.

At the request of a number of prominent owners and managers connected with the brickmaking industry, Mr. S. McPherson (who organised the Institution of Quarry Managers and is its General Secretary) has undertaken to organise the National Association of Clayworks' Managers, with the object of combating the menace to the industry threatened through foreign competition.

Free Lime in Hydraulic Cement.

The Department of Scientific and Industrial Research have issued "The Determination of Free Lime in Hydraulic Cement," by P. L. Braby, M.Sc., and F. J. McConnell, published by H.M. Stationery Office, price 6d. net. Numerous experiments upon Portland cement have been carried out, and it has been found that the destructive action of fire on concrete depends on two main causes—one of which is the presence of free lime. The tests described in this paper afford valuable evidence on the conditions and probable behaviour of set and unset cements.

Competitions for Painters and Decorators.

The National Painters' and Decorators' Joint Education Committee of England and Wales announce their annual prize competition for apprentices and craftsmen, to be held in October, 1927. The competitions are now open to all apprentices, journeymen and employers in England and Wales who come within the respective ages classification, provided that they are definitely engaged in or preparing to follow the craft. There are four classes, together with a preliminary class, ranged according to age. Full particulars may be obtained from Mr. Will Mellor, Secretary, National Joint Education Committee, 9, Albert-square, Manchester.

A London Carillon.

New premises for Messrs. J. & E. Atkinson perfumers, have just been completed at 24, Old Bond-street, W.1. A feature of the building is a steeple containing a carillon made and hung by Messrs. Gillett & Johnston, of Croydon. Messrs. E. Vincent Harris, F.R.I.B.A. and J. H. G. Stanborough are the architects for the work, and Messrs. E. A. Roome & Co., Ltd., are the builders.

THE SCOTTISH BUILDER

NEW BUILDINGS IN SCOTLAND

Aberdeen.—COLLEGE.—The Governors of Robert Gordon's Technical College have agreed that the Technical College building scheme be proceeded with as soon as possible at an estimated cost of £103,000, including the cost of buildings, apparatus, equipment, architect's fees, and clerk of works' salary. The Governors agreed, on the recommendation of the Buildings and Finance Committee, that Mr. R. Leslie Rollo, principal teacher of architecture in the College, be appointed architect for the works.

Aberdeen.—HOUSES.—The Housing Committee of Aberdeen Town Council has approved of a scheme to provide 1,000 new houses. The scheme is for the erection of 250 blocks containing four dwelling-houses of three rooms, a kitchen, and a bathroom. The houses, which will be erected mostly at Hilton and Catofield, will be built of bricks, roughcast, and will cost £390 per dwelling, or £1,560 per block. The scheme has been approved by the Scottish Board of Health.

Dundee.—ALTERATIONS.—Extensive alterations are being carried out at the Kinema, Tay-street. A new entrance will be constructed. The hall will be entirely re-seated and a new gallery built to seat 160 people.

Edinburgh.—BUILDING.—The Dean of Guild Court has granted warrants for the erection of six bungalows at Traquair Park, Corstorphine; bungalow at Oxgrange-road, Fairmilehead; bungalow at Roull-road, Corstorphine; and four bungalows at Braid-road. Permission has also been granted to the Craigmillar Creamery Co. to erect a cold store at Craigmillar.

Glasgow.—COLLEGE.—In pursuance of the scheme for the establishment of a Scottish National Commercial College, a site has been purchased in Glasgow at a cost of £14,500. It is hoped that the new building, which will have frontages to West Regent, Pitt, and Jane-streets, will be completed by the summer of 1928. The new building is expected to cost about £100,000, and the Scottish Education Department has approved the scheme, and agreed to pay 25 per cent. When completed the new college will take the place of the West of Scotland Commercial College, now housed in the Athenæum.

Glasgow.—VARIOUS.—Plans passed: Hall and committee rooms, at Battlefield-road, at Cathcart-road, for Cathcart Divisional Labour Party; eight semi-detached villas at Kelburn-avenue, Dumbreck, for Taylor & Wilson, Cardonald; filling station at Cumbernauld-road, for North Eastern Automobile Co.; sub-stations at Ralson-drive and Aitkenhead-road, for Corporation Electricity Department; houses at Arklet-road, Langlands, for Corporation Housing Department; 182 houses to south of Southampton-drive and Winchester-drive, for Messrs. Mactaggart & Mickel, Ltd.

Kirkcaldy.—HOUSING.—The Kirkcaldy District Committee of Fife County Council has agreed to proceed with the erection of 396 houses, and to make applications to the Scottish Board of Health and the County Council for their consent to these proposals. The expenditure involved is estimated at £158,400. The houses are to be erected within the Kirkcaldy district.

Obituary.

The death has taken place of Mr. C. A. Hendry, retired surveyor, who was a well-known member of the building trade in Inverness and the North. He was over eighty years of age.

Leeds Building Exhibition.

Through the medium of *The Yorkshire Post*, a Building Trades Exhibition will be held in Fenton-street Drill Hall, Leeds, from Wednesday, the 12th inst., to Saturday, the 22nd inst. One of the main features of the Exhibition will be a building incorporating and illustrating the various ways of adopting standard products.

BUILDING TRADE WAGES IN SCOTLAND.*

THE following are the present rates of wages in the building trade in the principal towns of Scotland. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur:—

	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers—Masons', Bricklayers', Plasterers'.
Aberdeen	1/8	1/8½	1/8	1/8	1/8	1/8	1/7	10½d. to 1/1
Airdrie	1/8	1/8	1/8	1/8	1/8	—	1/6½	1/3
Alexandria	1/8	1/8	1/8	1/8	1/8	1/8	—	1/2½ to 1/3½
Arbroath	1/7	1/7	1/7	1/7½	1/7	1/7	1/5½	1/1½
Ayr	1/8	1/8	1/8	1/8	1/8	1/8	1/6½	1/3
Bathgate	1/8	1/8	1/8	1/8½	1/8	1/8	1/6½	1/2 to 1/3
Blairgowrie	1/7	1/7	1/7	1/7½	1/5	1/7	1/4	10d. to 1/-
Bo'ness	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3
Coatbridge	1/8	[illegible]/8	1/8	1/8	1/8	—	1/6½	1/3 to 1/3½
Dumbarton	1/8	[illegible]	1/8	1/8	1/8	1/8	1/8	1/3½
Dumfries	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Dundee	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3
Dunfermline	1/8	1/8	1/8	1/9	1/8	1/8	1/8	1/3½
Edinburgh	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Falkirk	1/7½	1/7½	1/7	1/8	1/7	1/7	1/6½	1/2½
Fort William	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/2
Galashiels	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Glasgow	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Greenock	1/8	1/8	1/8	1/9	1/8	1/8	1/7	1/0½ to 1/3½
Hamilton	1/8	1/8	1/8	1/9	1/8	1/8	1/6½	1/3½
Hawick	1/7	1/7	1/7	1/7-1/7½	1/7	1/7	1/7	1/2½
Helensburgh	1/8	1/8	1/8	1/9	1/8	1/8	1/7	1/3½
Inverness	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/- to 1/3
Kilmarnock	1/8	1/8	1/8	1/9	1/8	1/8	1/8	1/3½
Kirkcaldy	1/8	1/8	1/8	1/9	1/8	1/8	1/8	1/3½
Kirkwall	1/5	1/5	1/4	1/5	1/5	1/4	1/4	1/-
Lanark	1/8	1/8	1/8	1/9	1/8	1/8	1/6	1/0 to 1/3
Leith	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Motherwell	1/8	1/8	1/8	1/9	1/8	1/8	1/6½	1/3½
Perth	1/8	1/8	1/8	1/9	1/8	1/8	1/6½	1/3
Stirling	1/8	1/8	1/8	1/9	1/8	1/8	1/8	1/3½
Stirlingshire (Eastern District)	1/8-1/10	1/8 1/10	1/8	1/9	1/7	1/8	1/8½	1/3½
Wishaw	1/8	1/8	1/8	1/9	1/8	1/8	1/7	1/3½

* The information given in this table is copyright. The rates of wages in the various towns in England and Wales are given on page 27.)

CURRENT PRICES FOR BUILDING WORK IN LONDON

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	11	0
Add if in clay	" "	1	0
Add for every additional depth of 6 ft.	" "	0	6
Planking and strutting to trenches	per foot super	0	5
Do. to sides of excavation, including shoring	" "	1	0

CONCRETOR.

Portland cement concrete in foundation 1 to 6	per yard cube	38	0
Add if in underpinning in short lengths	" "	7	0
Add if in floors 6 in. thick	" "	3	3
Add if in beams	" "	3	9
Add if aggregate 1 : 2 : 4	" "	10	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	" "	2	6

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	32	0	0
Add if in stocks	"	7	10	0
Add if in Staffordshire blues	"	22	0	0
Add if in Portland cement and sand	"	1	10	0

FACINGS.

Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft super	0	0	1½

POINTING.

Neat flat struck or weathered joint	" "	0	0	3

ARCHES.

Extra only to the price of ordinary brickwork :—				
Fair external in half brick rings	" "	0	0	10
Axed in stocks	" "	0	1	9
Rubbed and gauged jointed in putty camber or segmental	" "	0	6	0

SUNDRIES.

Damp course in double course of slates breaking joint and bedded in Portland cement	" "	0	1	0
Setting ordinary register grates and stoves	each	1	0	0
Setting kitchener, including forming flues, &c., with all necessary fire bricks	"	4	15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard sup.	4	3
Three-quarter-inch vertical damp course	" "	8	6
¾ inch on flats in two thicknesses	" "	6	3
Angel fillet	per foot run	0	3
Skirting and fillet 6 in. high	" "	1	2

MASON.

York stone templates fixed	per foot cube	13	0
York stone sills fixed	" "	22	0
Bath stone and all labour fixed	" "	10	6
Portland stone fixed	" "	20	0

SLATER.

Welsh 16 in. × 8 in. 3 in. lap, including nails	per square	72	9
Do 20 in. × 10 in. Do. Do.	"	80	9
Do. 24 in. × 12 in. Do. Do.	"	90	0

CARPENTER AND JOINER.

Fir framed in plates	per foot cube	5	0
Do. joists	" "	5	6
Do. roofs, floors, and partitions	" "	6	0
Do. trusses	" "	8	6

	¾"	1"	1¼"	2"
Deal rough close boarding per sq.	35/6	40/-	45/-	72/-

		s.	d.
Flat centering for concrete floor, including struts or hangers	"	50	0
Do. to beams	per ft. sup.	1	0
Centres for arches	"	1	6
Gutter boards and bearers	"	1	0

FLOORING.

	¾"	1"	1¼"	1½"
Deal-edges shot per sq.		44/6	53/-	60/6
Do. tongued and grooved "		49/-	57/6	65/-
Do. matchings "	45/-	51/-		
Moulded skirting, including backings and grounds per ft. sup.	1/6	1/9	2/0	2/6

SASHES AND FRAMES.

		s.	d.
One-and-a-half moulded sashes or casements	per foot super.	1	10
Two Do. Do. Do.	" "	2	1
Add for fitting and fixing	" "	0	3
Deal-cased frames with 1 in. inner and outer linings, 1½ in. pulley stiles tongued to linings, hard wood sills with 2 in. moulded sashes in squares, double hung, double hung with pulleys, lines and weights; average size	" "	3	9

DOORS.

	1½"	1¾"	2"
Two-panel square framed per ft. sup.	2/1	2/4	2/6
Four-panel Do. "	2/5	2/8	2/11
Two-panel moulded both sides "	2/8	2/11	3/2
Four-panel Do. Do. "	2/11	3/2	3/5

CARPENTER AND JOINER—continued.

FRAMES.

Deal wrot moulded and rebated	per foot cube	14	0	

	1"	1¼"	1½"
Plain deal jamb linings framed per ft. sup.	1/7	1/8	1/11
Deal shelves and bearers "	1/4	1/6	1/9
Add if cross-tongued "	2d.	2d.	2d.

STAIRCASES.

	1"	1¼"	1½"	2"	2½"
Deal treads and risers in and including rough brackets	2/1	2/4	2/9	—	—
Deal strings wrot on both sides and framed	1/8	2/-	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. × 1¼ in.	per ft. run	0	9
Mahogany handrail: average 3 in. × 3 in.	" "	6	0
Add if ramped	" "	11	10
Add if wreathed	" "	23	9

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/-
Sash fasteners	11½d.	Mortice locks	4/6
Casement fasteners	1/5	Patent spring hinges and letting into floor and	
Casement stays	1/2	making good	19/-
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	16	3
Plain compound girders	"	19	0
Do. stanchions	"	21	9
In roof work	"	27	6

RAIN-WATER GOODS.

		3"	4"	5"	6"
Half-round plain rebated joints	ft. run	1/6	1/9	2/-	2/6
Ogee Do. Do.	"	1/9	2/-	2/6	3/3
Rain-water pipes with ears	"	1/9	2/7	—	—
Extra for shoes and bends	each	4/4	5/11	—	—
Do. stopped ends	"	1/11	2/4½	3/7	4/-
Do. nozzles for inlets	"	2/2	2/7	3/10	4/3

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	53	6
Do. Do. in flats	"	52	6
Extra labour and solder in coated cesspools	each	6	9
Welf joint	per ft. run	0	6
Soldered seam	" "	1	6
Copper nailing	" "	0	6

		½"	¾"	1"	1½"	2"	4"
Drawn lead waste	per ft. run	1/2	1/9	2/-	3/4	4/-	—
Do. service	"	1/8	2/2	2/7	3/10	—	—
Do. soil	"	—	—	—	—	—	6/9
Bends in lead pipe	each	—	—	—	—	3/3	8/2
Soldered stop ends	"	1/2	1/8	2/1	2/10	3/6	—
Red lead joints	"	11d.	1/-	1/3	1/11	2/4	4/10
Wiped soldered joints	"	2/10	3/6	4/-	4/11	6/6	9/9
Lead traps and cleaning screws	"	—	—	—	14/7	19/6	—
Bib cocks and joints	"	6/4	9/7	15/4	41/-	—	—
Stop cocks and joints	"	15/4	17/2	25/8	64/-	—	—

PLASTERER.

Render, float and set in lime and hair	per yard sup.	2	4
Do. Do. Sirapite	" "	2	9
Do. Do. Keen's	" "	4	0
Add sawn lathing	" "	1	7
Add metal lathing	" "	2	6
(Not including hangers or runners, &c., for suspended ceilings.)			
Portland cement screed	per yard sup.	2	2
Do. plain face	" "	3	3
Mouldings in plaster	per 1 girth	0	1½
One-and-a-half granolithic pavings	per yard sup.	5	9

GLAZIER.

21 oz. sheet plain	per foot sup.	0	8½
26 oz. Do.	" "	1	0
Obscured sheet	" "	1	1
⅛ in. rolled plate	" "	0	9
¼ in. rough rolled or cast plate	" "	0	10½
¼ in. wired cast plate	" "	1	4

PAINTER.

Preparing and distempering, 2 coats	per yard sup.	0	9
Knotting and priming	" "	0	7
Plain painting, 1 coat	" "	0	9
Do. 2 coats	" "	1	2
Do. 3 coats	" "	1	9
Do. 4 coats	" "	2	4
Graining	" "	2	3
Varnishing twice	" "	1	9
Sizing	" "	0	3
Flatting	" "	0	7
Enamel	" "	1	1
Wax polishing	per foot sup.	0	6
French polishing	" "	1	2
Preparing for and hanging paper	per piece, 2/- to 4/-		

* These prices apply to *new buildings only*. They cover superintendence by foreman and carry a profit of 10 % on the prime cost without establishment charges. A percentage of 1½ should be added for Employers' Liability and National Health and Unemployment Acts and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

NEW COMPANIES

THE particulars quoted below have been compiled by Messrs. Jordan & Sons, Ltd., Company Registration Agents, of 116 & 117, Chancery-lane, W.C.2, from the documents available at the Companies' Registry.

W. R. WALKER, LTD. (217,950). Registered December 3. 97, Mount-street, Grosvenor-square, W. 1. Builder, ironmonger and electrician. Nominal capital, £2,943.

CORY & CORY, LTD. (217,993). Registered December 6. 1, Devonshire-road, Forest Hill, S.E. 23. Builders, decorators, plumbers, &c. Nominal capital, £1,500.

JOHN PAUL & SONS, LTD. (218,111). Registered December 10. General builders and contractors, &c. Nominal capital, £4,000.

D. M. CROWTHER, LTD. (218,038). Registered December 8. Builders' joinery and constructional woodwork, carpenters, &c. Nominal capital, £2,000.

WESTMINSTER ROAD CONSTRUCTION & ENGINEERING CO., LTD. (218,058). Registered December 8. Constructors of public works, &c. Nominal capital, £5,000.

GEORGE WARD (MOXLEY), LTD. (218,096). Registered December 10. Brick, tile, pottery and earthenware manufacturers, &c. Nominal capital, £6,000.

T. W. STAPELY, LTD. (218,108). Registered December 10. Timber and builders' merchants, joiners, &c. Nominal capital, £500.

PETER HODKINSON, LTD. (218,138). Registered December 11. Builder, joiner and contractor. Nominal capital, £5,000.

JOHN CLAYTON, LTD. (218,137). Registered December 11. Joiners, builders, and contractors. Nominal capital, £10,000.

CONCRETE FORM ERECTING & CONSTRUCTION CO., LTD. (217,830). Registered November 29. Contractors for the purpose of erecting all classes of forms or "shuttering" for concrete construction, builders, &c. Nominal capital, £200.

LUMB BROS., LTD. (217,986). Registered December 6. Slaters, plasterers, and patentees and manufacturers of concrete and pebble-dashed bricks and blocks. Nominal capital, £1,500.

J. W. LEE, LTD. (218,097). Registered December 10. Yarrow Road Saw Mills, Yarrow-road, Chorley, Lancs. Builders, contractors, joiners, &c. Nominal capital, £7,000.

J. COLLIER & CO., LTD. (218,329). Registered December 20. Bridge Chambers, 16, St. Petersgate, Stockport. Builders and contractors timber merchants, &c. Nominal capital, £1,000.

AMENIK THEATRES, LTD. (218,314). Registered December 20. To acquire the suitable sites for the construction of halls and other buildings and premises, &c. Nominal capital, £1,000.

WILLIAM MCGLAUGHLIN, LTD. (218,240). Registered December 16. 126, Kelvin-street, Ashton-under-Lyne. Builders, joiners, building contractors, &c. Nominal capital, £100.

GEORGE W. PAYNE, LTD. (218,223). Registered December 16. 682, Washwood Heath-road, Ward End, Birmingham. Builders and general property repairers, plumbers, &. Nominal capital, £1,000.

ROCKBEARE QUARRIES, LTD. (218,275). Registered December 17. East Street, Whimple, Devon. To acquire the freehold of the quarry and land of Rockbeare Quarry. Nominal capital, £5,000.

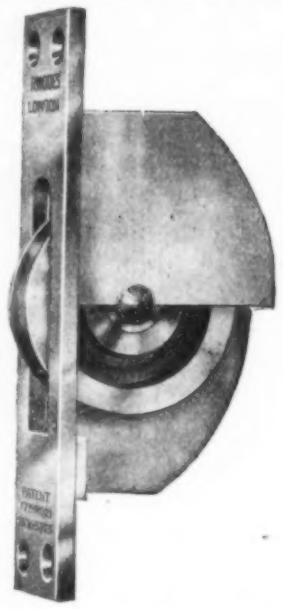
M. B. BOUNDS & SON, LTD. (215,268). Registered December 17. 2, Gaza Street, New street, Kennington Park-road, S.E. 17. Marble, stone and granite merchants and manufacturers. Nominal capital, £1,000.

JOHN A. TARRY, LTD. (218,262). Registered December 17. 75, Beresford-road, Chingford. E. 4. Builders and estate developers. Nominal capital, £2,000.

WOMEN DECORATORS, LTD. (218,212). Registered December 15. 28A, Park-road, Upper Baker-street, Marylebone, W. Decorators, repairers, fine art dealers, &c. Nominal capital, £100.

TRADE NEWS

WE have received from Messrs. Rhodes' Chains, Ltd., their new brochure "Sash Hanging to Perfection," being a concise standard formula for hanging D.H. sashes with pulleys and chains.



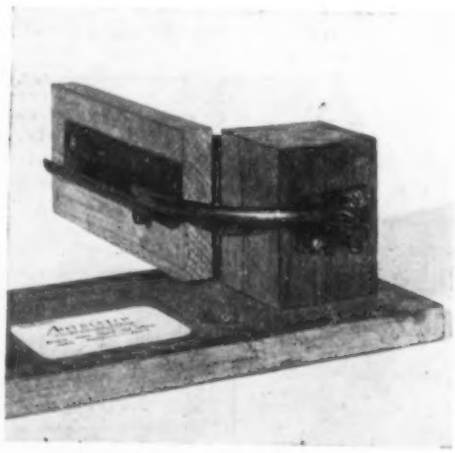
We give here an illustration of Rhodes' steel-sleeve axle pulley with solid brass face-plate—part of one of the rustproof steel cheeks being cut away to make visible the fixed ½ in. solid steel-sleeve on which the wheel runs as easily as on a ball bearing. There are no parts to break or get out of order. Full information may be obtained from the makers at 26, Charing Cross-road, W.C.2.

Warwickshire Trunk Roads Scheme.

We quote from the notes of Mr. D. H. Brown, the Warwickshire County Surveyor, who is handling the above scheme, the following passage:—"On the Stonebridge to Allesley section were tested the qualities of Winget's new open drum mixer, which has been doing yeoman service on this part of the scheme. An average output from this machine, which is the 7/5 model run by a 5 h.p. 'Lister' petrol engine, of more than 80 cu. yards of mixed concrete per day has been got." The mixer in question is the product of Messrs. Winget (1924), Ltd., of Grosvenor-agrdens, S.W.1, who specialise in road-making plant.

Automatic Door Catches.

Messrs. Teekay, Ltd., of 336, Gray's Inn-road, have brought out an automatic door and gate catch, "The Auto-catch," designed to hold doors (such as garage, greenhouse, street and kitchen, garden gates, &c.) open without the



necessity for fiddling with hooks and bolts. The fittings are made in two sizes, one for medium-sized doors and gates, and also an extra heavy set for large garage doors, &c. Full details will be sent upon request.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach him not later than Tuesday evening.

* Denotes *accepted*. † Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modifications*.

ABERDEEN.—Reconstruction of buildings at Oldmill, for workmen's dwellings, for the P.C.:—
Mason—J. C. Corbett.
Carpenter—W. May.
Slater—C. Maitland & Son.
Plumber—J. & G. Munro.
Plasterer—Coutts & Leask.
Painter and glazier—A. Brannan & Sons.
(All of Aberdeen.)

ARMLEY.—Employment Exchange, for H.M.O.W.:—
*Appleyard Bros.

BATH.—Structural alterations to the Swallow-street engine house, for the T.C.:—
*F. J. Amery & Son £439

BATH.—Adaptation of the Blue Coat School for offices School Clinic, and provision of Maternity and Child Welfare Centre, for the T.C.:—
*F. J. Amery & Son £6,857

BILLINGHAM.—For (*a*) 38 parlour and (*b*) 20 non-parlour type houses, on the Chilton's-lane site, for the U.D.C.:—
*J. G. Porteous, Ltd., Middlesbrough—
(*a*) £443 each
(*b*) £422 each

BILLINGHAM.—For (*a*) 32 parlour and (*b*) 20 non-parlour type houses, on the Belasis-lane site, for the U.D.C.:—
*T. Sweeting, Middlesbrough— (*a*) £441 each
(*b*) £419 each

BILLINGHAM.—For (*a*) 32 parlour and (*b*) 24 non-parlour type houses, on the Belasis-lane site, for the U.D.C.:—
*J. McCreton, Ltd., North Ormesby—
(*a*) £446 each
(*b*) £428 each

BILLINGHAM.—For (*a*) 36 parlour and (*b*) 20 non-parlour type houses, on the Belasis-lane site, for the U.D.C.:—
*G. Fordy, Stockton ..... (*a*) £426 each
(*b*) £414 each

BIRMINHGAM.—Electric power station at Hams Hall:—
*Combustion Engineering Co., Derby £1,500,000

BLACKPOOL.—Gates and railings in connection with the new Claremont Schools, North Shore, for the E.C. Mr. F. Wood, Borough Engineer:—
*Fish & Wright, Marton.

BRADFORD.—Mill premises at Bower Green, for the Bower Green Combing Co., Ltd. Messrs. Saml. Jackson & Sons, architects, Piccadilly:—
Mason—*Wm. Garnett & Co.
Joiner—*Gamble & Shapcott.

BRAINTREE.—Twenty-four houses in two types on the Cressing-road site, for the U.D.C. Mr. D. G Armstrong, architect, Great-square:—
*A. G. Wicks, Braintree—16 houses .. £6,200
*Jipp & Berry, Bocking—eight houses 3,014

BRISTOL.—Branch offices in Baldwin-street, for the Refuge Assurance Co., Ltd. Mr. S. Birkett, A.R.I.B.A., architect, 16, John Dalton-street, Manchester:—
*W. Cowlin & Son, Bristol.

CHELMSFORD.—Elementary school, together with all outbuildings, fencing, playgrounds and caretaker's house, on the Boarded Barns Estate, Chelmsford, for the T.C. Mr. E. J. Miles, Borough Engineer; quantities by the Borough Engineer:—

A. E. Symes, Stratford, London ..	£26,334	0	
A. Arnold, Chelmsford	26,244	0	
J. G. Gray, Coventry	26,101	0	
C. Maidwell & Co., Ltd., Stowmarket	26,000	0	
E. Moss & Sons, Southend-on-Sea	25,650	0	
P. J. Turner, Ipswich	25,429	0	
F. R. Hipperson, London	25,137	0	
A. Holmes, Chelmsford	24,350	0	
H. Potter, Chelmsford	23,603	0	
F. Hutton & Son, Birch, Colchester	23,599	0	
F. J. French, Chelmsford	23,420	0	
T. J. Bailey, Chelmsford	22,943	12	
*G. J. Hawkes & Sons, Chelmsford	22,167	10	
J. Byrom, Ltd., London and Bury	22,000	0	

CLEETHORPES.—Additions to the Reynold-street School, for the Lindsey County E.C. Messrs. Scorer & Gamble, architects, Bank-street Chambers, Lincoln:—

Dennis Gill & Son, Doncaster ..	£16,900	0	0
E. E. Dale & Sons, Ltd., Cleethorpes	15,081	7	2
Jackson & Oates, Goole	14,321	0	0
W. Kirton & Son, Grimsby ..	13,979	0	0
B. Pumfrey, Ltd., Gainsborough	13,899	0	0
Wilkinson & Houghton, Ltd., Grimsby	13,777	0	0
†Hewins & Goodhand, Ltd., Grimsby	13,724	0	0

COLNE.—Tiling, with Beauvais tiles, on the roofs of the houses comprised in the No. 3 (Judge) Fields, housing scheme, for the T.C.:—
*Beaumonts (Manchester), Ltd.

DEWSBURY.—Fifty-four houses on the Ravens Lodge site, for the T.C. :—

Mason—
*A. C. Smith £10,200 7 8
Joiner—
*W. West 5,347 14 0
Plumbers—
*Atkinson & Smith 3,290 9 0
Slaters—
*G. Fawcett & Sons 1,795 0 0
Plasterers—
*W. Lockwood (22 houses) 977 13 10
*F. Boothroyd (24 houses) 671 2 0
*J. Greenwood (8 houses) .. 263 17 8
Painter—
*J. Bowers 374 3 10

DEWSBURY.—Sixty-four houses on the Thornhill site, for the T.C. :—

Mason—
*J. Donovan £12,609 2 0
Joiners—
*J. Brooke & Sons 6,907 14 2
Plumbers—
*J. Auty & Son 3,925 0 0
Slaters—
*W. R. Thompson & Co. .. 2,166 0 0
Plasterers—
*Wilson & Townsend (20 houses) 672 0 0
*G. Crossley & Son (20 houses) 913 5 0
*J. Richardson (24 houses) 630 0 0
Painter—
*J. Bowers 458 14 10

DOVER.—Ferro-concrete bridge and incidental works at Common-lane, River, for the T.C. Mr. Wm. Boulton Smith, Borough Engineer :—

J. Shelborne & Co., Ltd., London £2,925 12 9
D. G. Somerville & Co., Ltd., London 2,384 14 2
Industrial Construction, Ltd., London 2,057 18 10
F. Mitchell & Son, Ltd., Manchester 1,910 3 6
Bridge and Engineering Co., Banbury 1,827 8 0
G. E. Everett, Croydon..... 1,822 0 0
Hayward & Paramor, Ltd., Dover..... 1,696 0 0
Mears Bros., London..... 1,679 11 4
*G. Davis & Sons, Ltd., Dover.. 1,659 0 0

DUBLIN.—Painting work at Tara-street baths, for the C.B. :—

Michael Alford £364 0 0
J. Gilmer 278 7 0
A. Panton Watkinson 241 16 0
L. & J. Duff 237 11 2
C. Jones & Sons 236 0 0
J. Dowling & Co..... 208 7 0
*J. Daly 190 8 0
(All of Dublin.)

EASTBOURNE.—For (*a*) alterations to the ladies' conveniences at the Pier, and (*b*) alterations to the conveniences at Holywell, for the T.C. :—

Miller & Selmes ..... (*a*) £1,098 3
(*b*) 1,403 16

FLINT.—Thirty-six houses on Earl-street, for the T.C. Mr. W. B. Edwards, A.R.I.B.A., architect, 84, Church-street :—

*M. S. Rogers & Son, Flint.

GOSPORT.—Public mortuary in St. Matthew's depot, for the T.C. Mr. A. Barlow, Borough Engineer :—

*F. W. Johnson, Brockhurst, Gosport £766 7 9

GRAVESEND.—Construction of an elementary school at King's Farm, Gravesend, for the B.C. Mr. J. G. Bennett, L.R.I.B.A., architect, 4, Woodville-terrace. Quantities by Mr. W. H. Smith, 18, High-street, Maidstone :—

G. E. Wallis & Sons, Ltd., Gravesend..... £11,888
Hopkins & Sons, Gravesend..... 11,882
Burvill & Steen, Gravesend 11,450
A. E. Tong, Gravesend 11,072
*H. Friday & Sons, Erith 10,840

GREENOCK.—Painter work of 104 houses in course of construction at S. Craigieknowes, for the Corporation. Mr. R. Millar, Surveyor. Quantities by Messrs. Woodrow & Thomson, Greenock :—

Charles Marshall, Glasgow £1,014 14 10
C. Reid McFarlane, Glasgow.... 887 5 8
J. McCallum & Son, Glasgow .. 823 11 1
McAllister & Fyfe, Greenock .. 793 16 10
A. & J. Laird, Glasgow..... 740 4 0
J. M. Walker & Co., Renfrew .. 709 7 6
P. McKerracher & Sons, Glasgow 694 18 1
Hart & McGill, Greenock 688 14 9
Peter Mackie, Port Glasgow .. 589 11 1

GRIMSBY.—Maternity home at Nunsthorpe, for the T.C. :—

*Steele & Goddard, Grimsby £2,777 5

GRIMSBY.—Tiling and other work at the baths, for the T.C. :—

*G. H. Hipkin, Grimsby £198 12 8

GUILDFORD.—Supplying and fixing 176 gates and posts and wire fencing to 170 houses on the Aldershot-road estate, for the T.C. :—

*Astolat Fencing Co. £621 13 8

GUILDFORD.—Stripping and glazing skylights at the public baths, for the T.C. :—

*Mellowes & Co., Ltd. £259 12 8

HEATON.—New cottages at Bingley-road, for Messrs. Empsall, Clarkson & Clarke, architects :—

Builder—*C. H. Smith.

HEBDEN BRIDGE.—Fourteen houses in three blocks at Eaves, for the U.D.C. Mr. H. L. Bottomley, architect and surveyor :—

Masons—*H. Mortimer and Son, Hebden Bridge.
Mason—*O. Watson, Hebden Bridge.
Joiner—*E. Johnson, Halifax.
Plumber—*J. H. Boocock, Hebden Bridge.
Plasterer—*E. Marshall, Halifax.
Slaters—*Pickles Bros., Leeds.
Painter—*F. Round, Hebden Bridge.
Electricians—*Harrison & Co., Halifax.
Street and Sewer—*L. Mortimer, Hebden Bridge.

HORNSEA.—Pair of villas on the Redroofs Estate Mr. R. McCarthy, architect, Bank-street :—

*Dixon & Co., Hull..... £1,100

HORNSEA.—Four summer bungalows on the Belvedere Park estate. Mr. R. McCarthy, architect, Bank-street :—

*Shields & Ulliott, Hull £1,480

HORNSEA.—Six villas on the Redroofs Estate, Hornsea. Mr. R. McCarthy, architect, Bank-street :—

*Shields & Ulliott, Hull £3,300

HORNSEA.—Mansard roof villa on the Mereside estate, for Mr. G. E. Shepherd. Mr. R. McCarthy, architect, Bank-street :—

*G. Watson, Leven Hull £700

HUNTLY.—Building, &c., work at Farm Steading, Millhill. Mr. J. Wittet, architect, Elgin :—

Builder—*Morrison, Lipp & Drummond, Huntly.
Plumber—Henry A. Grant, Huntly.

KESWICK.—Church, for the Rev. W. S. Dawes, St. Joseph's R.C. Church, Cockermouth. Mr. H. Oldfield, L.R.I.B.A., architect, 1, John-street, Workington :—

*W. Cowperthwaite, Keswick.

LAISTERDYKE.—Warehouse, combing shed and offices for Messrs. W. J. Whitehead & Co. Messrs. Ross & Briggs, architects :—

*Phineas Drake & Sons.

LEEDS.—Seventy-two type "A3" houses on the Harehills-lane Housing Estate, for the re-housing of persons displaced by the carrying out of street improvements, for the T.C. :—

‡Pickard & Co. £30,600

LEEDS.—Painting the interior of the Corn Exchange, for the T.C. :—

*A. Bagnall & Sons, Ltd. £590 18
(In lieu of W. Noddings.)

LEEDS.—Conveniences to bowling greens and tennis courts at Woodhouse Moor, for the T.C. :—

*Mark Haley £465 14 6
(In lieu of Cooper & Silversides.)

LONDON.—Erection of the Stamford-hill electricity sub-station, for the Hackney B.C. Mr. L. L. Robinson, Borough Electrical Engineer, 18-24, Lower Clapton-road, E.5 :—

C. A. Trayte & Co. £12,972 6 6
Commercial Structures, Ltd. .. 12,581 13 6
W. H. T. Kelland & Sons, Ltd. 11,548 0 0
Walter Jones & Sons, Ltd. .. 11,237 13 6
Wm. Shurman & Sons, Ltd. .. 11,143 0 0
D. G. Somerville & Co. 10,996 0 0
Douglas Halse & Co., Ltd. 10,975 0 0
Henry Knight & Son 10,909 0 0
W. M. Brand..... 10,876 0 0
R. J. Rowley 10,788 0 0
Vigor & Co. (Poplar), Ltd. 10,652 0 0
Stevens & Sons..... 10,567 0 0
Henry Newell 10,000 0 0
Canonbury Construction Co., Ltd. 9,989 11 0
*J. Jarvis & Sons, Ltd. 9,960 0 0
S. Shaw 9,869 0 0
(All of London.)

LONDON.—Police married quarters in Cornwall-road, Lambeth, for the Metropolitan Police. Mr. G. Mackenzie Trench, F.R.I.B.A., F.S.I., Police Architect and Surveyor, New Scotland-yard, S.W. 1; quantities by Messrs. Thurgood, Son & Chidgey, 18, Adam-street, W. 6 :—

W. H. Lorden & Sons, Ltd. £111,408 0
Prestige & Co., Ltd..... 107,196 0
F. G. Minter, Ltd. 106,912 0
Dove Bros., Ltd. 104,861 0
Trollope & Colls, Ltd..... 104,795 0
Higgs & Hill, Ltd. 104,567 0
John Mowlem & Co., Ltd. 104,566 0
Holloway Bros. (London), Ltd. .. 104,276 0
Holliday & Greenwood, Ltd. 103,950 0
Thomas & Edge 103,339 0
T. H. Adamson & Sons 103,185 0
Ashford Builders Co., Ltd. 102,979 10
Patman & Fotheringham, Ltd. .. 102,721 0
L. H. & R. Roberts 101,828 0
Holland & Hannen and Cubitts, Ltd. 101,764 0
J. Parsons 100,577 0
Perry & Co. (Bow), Ltd..... 99,773 0
F. & H. F. Higgs, Ltd. 99,510 0

MABLETHORPE (LINCS.).—Addition to Council School, for the Lindsey County C.C. Messrs. Scorer & Gamble, Bank-street Chambers, Lincoln :—

W. & H. H. Vamplew, Boston .. £7,999 0 0
E. E. Dale & Sons, Ltd., Cleethorpes 7,308 5 6
Mawer Bros., Louth..... 6,880 0 0
Ingram Bros., Louth 6,756 18 8
Tuxworth & Sons, Louth 6,750 0 0
M. Otter & Co., Lincoln..... 6,590 0 0
John F. Bush, Nottingham 6,550 0 0
B. Pumfrey, Ltd., Gainsborough 6,318 0 0
M. Parker, Sutton-on-Sea 6,100 0 0
†Wm. Crane, Ltd., Nottingham.. 5,847 0 0

NEATH.—Fifty parlour-type houses, with sewers, on the Brynhyfryd-road site, for the T.C. Mr. H. Alex. Clarke, Borough Engineer :—

Daniel Phillips, Swansea £31,500 0 0
Hawkins & James, Merthyr .. 29,045 3 0
J. R. Cheley, Swansea..... 26,578 12 0
John Morgan, Neath 25,994 1 8
Reynolds, Harris & Co., Nantgarw 25,752 2 0
Richard Jones, Caerphilly 25,473 0 0
W. H. Snow & Sons, Neath .. 25,290 0 0
Johns & Hampton, Briton Ferry 25,135 0 0
L. Gower & Sons, Ltd., Briton Ferry 25,052 0 0
T. Cole & Sons, Ltd., Neath .. 24,789 0 0
I. Vaughan John, Port Talbot 24,098 0 0
Morgan, Cox & Sons, Port Talbot 23,923 0 0
S. T. Rees & Co., Ltd., Port Talbot 23,537 0 0
D. J. Davies, Blaengarw 22,987 0 0
James & Jones, Briton Ferry .. 22,852 0 0
*Lloyd & Davies, Port Talbot .. 22,463 0 0

NORTHALLERTON.—Registry of Deeds Offices, for the North Riding C.C. :—

*D. Oakley, Northallerton £10,384

PAISLEY.—Building work at Glasgow-road Barracks, for the T.C. Master of Works, 16, Gilmour-street :—

Builder work—*J. McEachran, Paisley.
Gates and Railings—*James Cassels & Sons, Paisley.

PENARTH.—Eighteen additional houses, for the U.D.C. :—

*J. Laing & Son, Ltd.
(Subject to M.H. approval.)

PLYMOUTH.—Office extension at the Old Guildhall, Plymouth, for the C.B. Mr. J. Wibberley, Borough Engineer and Surveyor :—

*C. J. Russell, Plymouth.

PORTSMOUTH.—Construction of men's convenience under South-parade Pier, for the Corporation. City Engineer :—

J. Lay & Co., Portsmouth..... £648
*L. Hoad, Southsea 589

PORTSMOUTH.—Alteration of garage and stores, &c., in Surrey-street, for Messrs. H. Martin & Son, Ltd. Mr. S. E. White, architect and surveyor, Southsea :—

*John Lay & Co.

PORTSMOUTH.—Rebuilding 252, Fratton-road, in connection with City-road widening scheme. Messrs. Burnett & Sons, architects, 2, High-street, Southampton :—

Porter & Son, Portsmouth.. £1,129 0 0
Davis & Son, Southsea 1,087 0 0
F. J. Privett, Southsea 1,052 0 0
E. & A. Sprigings, Portsmouth 1,027 0 0
S. Salter, Southsea 1,026 0 0
Tanner Bros., Southsea 1,020 15 6
J. Croad, Portsea 991 0 0
John Lay & Co., Portsmouth 880 0 0
*Bevis, Ltd., Portsmouth .. 871 4 9

PRESTON.—Junior elementary school between Frenchwood-avenue and Selborne-street, for the C.B. :—

*T. Croft & Sons, Preston..... £12,140

PRESTON.—144 houses on the Fishwick housing estate, for the C.B. :—

*M. J. Gleeson, Ltd., Sheffield..... £59,688
(Subject to M.H. approval.)

REIGATE.—Semi-permanent building on the site adjoining Hooley Council School for instruction in handicraft and cookery, for the T.C. :—

Carrington Thomas & Co., Beckenham £753
R. A. Mant, Isleworth..... 685
‡G. Watters, Acton..... 535

REIGATE.—Seven pairs of "A" and "B" type houses, and 10 pairs of "C" type houses, for the T.C. :—

*Atkinson & Potter Bros..... £19,100

RIBCHESTER.—Twenty dwellings near Bee Mill, for the R.D.C. :—

*W. Houghton, Longridge, near Preston.

ROTHWELL.—Houses, for the U.D.C. :—
26 houses at Rothwell-Haigh—
*T. Hanks ..... per house £364 3 4
12 Houses at Thorpe—
*F. Clough, East Ardsley „ 369 0 0
10 houses at Lofthouse—
*Mankin & Son .... „ 380 10 6
12 houses at Carlton—
*J. Chapman & Son.. „ 373 10 0
14 houses at Carlton—
*J. Bennett & Sons.. „ 380 0 6

SALFORD.—Installing electric light at the Trafford-road Boys' Council School, for the City Council :—

*Taylor & Son, Pendleton £125

SALFORD.—Two platforms for the coal conveyor at Clifton Sidings, for the City Council :—

*Slater & Shawcross, Pendleton £108

SALFORD.—Public conveniences at Church-street, Pendleton, for the City Council :—

*P. Hodkinson, Manchester..... £2,392

SALFORD.—Erection and completion of electricity showrooms in Chapel-street and Bexley-square, for the City Council :—

*R. Carlyle & Co., Ltd., Old Trafford £17,485

SHEFFIELD.—Six parlour-type houses on land in Ridgeway-road, for the T.C. :—

*G. H. Bodell..... £2,880

SHEFFIELD.—Structural work in connection with the laundry at Wales Court, for the T.C. :—

*C. W. Alflat..... £316

SHEFFIELD.—Additions and alterations to the switch room at the Neepsend Generating Station, for the T.C. :—

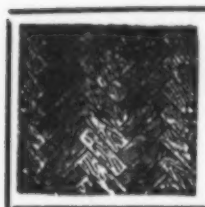
*G. Longden & Son, Ltd..... £519

SOUTHEND-ON-SEA.—Eight houses, comprising four parlour and four non-parlour type, in two blocks of four, for the Corporation. Mr. R. H. Dyer, Borough Engineer :—

*Johns Bros., London £3,760

SOUTHEND-ON-SEA.—Extensions to the refuse destructor, and works incidental thereto, at the sewage disposal works, Prittlewell, for the Corporation. Mr. R. H. Dyer, Borough Engineer :—

*J. E. Gray, Coventry..... £9,041



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STAINES.—Erection of an extension to the Hospital, Kingston-road, Staines, consisting of private wards, out-patients' ward and general ward, and certain administrative offices, for the Staines Cottage Hospital Committee :—

Humphreys, Ltd., Knightsbridge	£4,447 0
C. V. Gray, Hounslow.....	4,690 15
Greenwood & Son, Harlesden....	3,709 0
Gaze & Sons, Kingston	3,693 0
Lacey & Sons, Luton.....	3,600 0
Lovel & Sons, Beaconsfield	3,586 0
Rowe & Sons, Staines.....	3,418 15
Norris & Co., Sunningdale.....	3,300 0
Bridge & Co., Brixton.....	3,300 0
H. Webb & Co., Ashford.....	3,250 0
Triangular Construction, East Molesey	2,990 0
Drinkwater & Son, Feltham	2,990 0
*Baker & Co., Staines	2,989 0

SWANAGE.—Six pairs of houses on the housing site at Herston, Swanage, for the U.D.C. Mr. T. E. Grimes, architect, 33, The Triangle, Bournemouth :—

*J. Francis, Bournemouth..... £6,736 16

TAVISTOCK.—Twelve houses at Lifton, for the R.D.C. :—

*Rich & Son..... each £505

WATH-ON-DEARNE.—Newschools for St. Joseph's R.C. Church. Messrs. Empsall, Clarkson & Clarke, architects, Bradford :—

*J. Horkin, Liversedge.

WILLESDEN.—Repairs and decorations to the Education Offices, for the U.D.C. :—

*White & Anstey £214

WILLESDEN.—Alterations at the Town Hall, for the U.D.C. :—

*J. W. Buckingham & Sons .. £622 11 2

WINTERINGHAM.—Elementary school at Winteringham, for the Lindsey County E.C. Messrs. Scorer & Gamble, architects, Bank-street Chambers, Lincoln :—

E. E. Dale & Sons, Ltd., Cleethorpes	£6,115 16 5
Swift Bros., & Haslam, Ltd., Doncaster	6,017 0 0
Jackson & Oates, Goole.....	5,932 0 0
Wm. Pallister, Ltd., Scunthorpe	5,879 0 0
B. Pumfrey, Ltd., Gainsborough	5,799 0 0
F. W. Atkinson & Sons, Brigg..	5,522 0 0
†E. J. Routh, Winteringham ..	5,074 0 0

WORCESTER.—Improvement of the Cattle Market, for the T.C. :—

*A. H. Guest, Ltd., Worcester..... £6,317

WORTHING.—Erection of street-lighting and water department workshops and stores at rear of "Fairlawn," for the Corporation. Borough Surveyor:—

R. Cook & Sons, Ltd., Crawley.....	£2,555
J. Longley & Co., Ltd., Crawley....	2,515
S. W. Phillips & Co., London.....	2,398
F. Sandell & Sons, Worthing.....	2,393
*Limpus & Son, Hove	2,350

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